AZƏRBAYCAN RESPUBLİKASININ
QİDA TƏHLÜKƏSİZLİYİ AGENTLİYİ

FOOD SAFETY AGENCY
OF THE REPUBLİC OF AZERBAİJAN

AQTA

Ət və ət məhsullarının Səudiyyə Ərəbistanı Krallığına ixracı üçün Baytarlıq Sağlamlıq Sertifikatı

Veterinary Health Certificate for Export of Red Meat and Meat Products to the KSA

Logo

الشهادة الصحية البيطرية لتصدير اللحوم ومنتجاتها الى المملكة العربية السعودية

I.1	**Consignor (Exporter)** /Göndərən **Name** / Adı **Address** / Ünvan	المرسل (المصدر) الاسم العنوان
I.2	**Certificate Reference No.** / Sertifikatın № **Place of Issue** / Tərtib edilən yer **Date of Issue** / Tərtib tarixi	الرقم المرجعي للشهادة الصحية مكان الإصدار تاريخ الإصدار
I.4	**Consignee (importer)** / Alan **Name** / Adı **Address** / Ünvan	المرسل إليه (المستورد) الاسم العنوان
I.3	**Competent/Certifying Authority/** *İxracatcı ölkənin səlahiyyətli orqanı:* **Address** / Ünvan	الجهة الرقابية المختصة العنوان
I.5	**Country of origin** / Mənşə ölkəsi	بلد المنشأ **ISO code** رمز الأيزو
I.6	**Country of Destination** / Təyinat ölkəsi	بلد الوصول **ISO code** رمز الأيزو
I.7	**Producer/Slaughterhouse Est.** / İstehsalçı/ Kəsim müəssisəsi **Name** /Adı **Address** / Ünvan	الشركة الصانعة/المسلخ الاسم العنوان
I.8	**Packing Est. (if applicable)** / Qablaşdırma Təxm. (mümkünsə) **Name** / Adı **Address** / Ünvan	الشركة المعبأة (إن وجد) الاسم العنوان
	Halal Slaughtering Certificate / Halal kəsim sertifikatı **Source:** Mənbə	مصدرها:
I.9	**Certificate No:** Sertifikatın №	شهادة الذبح الحلال [1] رقم الشهادة
I.10	**Border of Entry/Country of Destination** / Giriş/Təyinat ölkəsi sərhəddi	بلد الوصول /منفذ الدخول
I.11	**Border of Loading/Country of Dispatch** / Yükləmə/Göndərmə ölkəsi sərhəddi	بلد المغادرة/موقع التحميل
I.12	**Means of transport/conveyance** / Nəqliyyat vasitəsi **By Air** / Hava yolu ☐ جوي **By Sea** / Dəniz ☐ بحري **By Road** / Yer üstü ☐ بري	وسيلة النقل
I.13	**Conveyance Identification No.** / Daşınma Nəqliyyat vasitəsinin № si	الرقم التعريفي/هوية وسيلة النقل
I.14	**Temperature of Food product** /Məhsulun temperaturu **Ambient** / Mühit **Chilled** / Soyudulmuş **Frozen** / Dondurulmuş	درجة حرارة حفظ المادة الغذائية درجة حرارة الغرفة مبرد مجمد

I.15 **Commodities Certified for**: Məhsulun təyinatı: — تم ترخيص البضائع لاستخدامها في:

Human Consumption Directly: / ☐ الاستهلاك الآدمي مباشرة: İnsan istehlakı üçün birbaşa:

Other ☐ / أخرى Digər /

After Further Process ☐ بعد معالجة إضافية Əlavə Prosesindən Sonra

I.16 **Identification of the Food Products** — توصيف وتصنيف الأغذية

Name & Description of Food / Məhsukun adı — اسم ووصف المادة الغذائية	HS-Code — بند التعرفة الجمركية	Treatment Type / Emal növü — نوع المعالجة	Brand Name / Markirovka (brend) — العلامة التجارية	Production Date / İstehsal tarixi — تاريخ الإنتاج	Expiry Date / Son istifadə müddəti — تاريخ الانتهاء	No Packages / Qablaşdırma sayı — عدد الطرود	Batch/Lot No. / Partiya № — رقم التشغيلة/الدفعة	Total Weight / Cəmi çəki — الوزن الكلي

I.17 **Health Attestations** / *Sağlamlıq qiymətləndirilməsi* — **الإفادات الصحية**

The meat and/or meat product are safe and fit for human consumption / *Ət və / və ya ət məhsulu təhlükəsizdir və insan istehlakı üçün yararlıdır*	أن اللحوم و/أو منتجاتها سليمة (آمنة) وصالحة للاستهلاك الآدمي
Animals have been slaughtered in a slaughterhouse approved and under the supervision of the competent authority of the exporting country and is approved by the Saudi Food and Drug Authority. / *Heyvanlar, ixracatçı ölkənin səlahiyyətli orqanının nəzarəti altında təsdiqlənmiş və bir Səudiyyə Qida və Dərman İdarəsi tərəfindən təsdiqlənmiş bir qəssabxanada kəsilib.*	تم ذبح الحيوانات في مسلخ مرخص ومعتمد من قبل الجهات المختصة في بلد المنشأ وموافق عليه من قبل الهيئة العامة للغذاء والدواء ويعمل تحت إشراف الجهة الرقابية المختصة بالدولة المصدرة.
The meat and/or meat product from animals that have been subjected to ante-mortem and post- mortem inspection by veterinarians assigned by the Competent Authority of the country of origin. / *Mənşə ölkəsinin səlahiyyətli orqanı tərəfindən təyin olunmuş baytarlar tərəfindən kəsimdən əvvəl və kəsimdən sonra yoxlamadan keçirilmiş heyvanların ət və / və ya ət məhsulu.*	أن اللحوم و/أو منتجاتها من حيوانات خضعت للفحص قبل الذبح وبعده من قبل أطباء بيطريين تابعين للجهة الرقابية المختصة في بلد المنشأ.
The meat and/or meat product was handled at an establishment that has been subjected to inspections by the competent authority and implements a food safety management system based on HACCP principles or an equivalent system. / *Ət və / və ya ət məhsulu, səlahiyyətli orqan tərəfindən yoxlanılsa məruz qalan və HACCP prinsiplərinə və ya ona bərabər tutulan bir sistemə əsaslanan qida təhlükəsizliyi idarəetmə sistemini tətbiq edən bir müəssisədə həyata keçirilmişdir.*	تم إجراء عمليات تداول اللحوم و/أو منتجاتها في منشأة خاضعة للرقابة من قبل الجهة الرقابية المختصة، وتطبق نظام إدارة سلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يوازيه.

Baş Dövlət Baytarlıq Müfəttişi — Chief Veterinary Officer

Galib Abdulaliyev,
Head of Animal Health Department of the Food Safety Agency of the Republic of Azerbaijan, Chief Veterinary Officer

	Good veterinary practices have been applied in the use of veterinary medicines (including growth promoters) and agriculture chemicals in live animals, and any residues of hormones, antibiotics, pesticides, heavy metals or any other pollutants in meat and/or meat product comply with (GSO 382,GSO 2481, GSO 1016, GSO CODEX STAN 193). / *Canlı heyvanlarda baytarlıq dərmanlarının (böyümə dəstəkləyiciləri daxil olmaqla) və kənd təsərrüfatı kimyəvi maddələrinin istifadəsində yaxşı baytarlıq təcrübələri tətbiq edilmişdir və hormonların, antibiotiklərin, pestisidlərin, ağır metalların və ya ət və / və ya ət məhsulundakı hər hansı digər çirkləndiricilərin qalıqları (GSO 382, GSO 2481, GSO 1016, GSO CODEX STAN 193).*	تم تطبيق الممارسات البيطرية الجيدة في استخدام الأدوية البيطرية (بما فيها محفزات النمو) والكيماويات الزراعية في الحيوانات الحية، وأن أي متبقيات من الهرمونات، المضادات الحيوية، المبيدات، المعادن الثقيلة أو غيرها من الملوثات في اللحوم و/أو منتجاتها متوافقة مع المتطلبات الخليجية GSO 382, GSO 2481, GSO 1016, GSO CODEX STAN 193
	The meat has been derived from healthy animals that have no apparent evidence of any contagious and/or infectious disease as listed by (OIE). / *Ət (OIE) tərəfindən göstərildiyi kimi hər hansı bir yoluxucu və / və ya yoluxucu xəstəliyə dəlil olmayan sağlam heyvanlardan əldə edilmişdir.*	أن مصدر اللحوم هو حيوانات خالية من الأمراض المعدية و/أو الوبائية والمتضمنة في قوائم المنظمة الدولية للصحة الحيوانية (OIE).
	The meat and/or meat product originates from animals that have not been slaughtered for the purpose of disease eradication or disease control. . / *Ət və / və ya ət məhsulu, xəstəliyin ləğvi və ya xəstəliklə mübarizə məqsədi ilə kəsilməmiş heyvanlardan qaynaqlanır.*	أن مصدر اللحوم و/أو منتجاتها لم يتم ذبحها بقصد القضاء على الأمراض أو التحكم فيها.
	The meat and/or meat product has not been derived from animals fed on processed animal protein, excluding fishmeal. / *Ət və / və ya ət məhsulu, balıq unu xaricində işlənmiş heyvan zülalı ilə qidalanan heyvanlardan əldə edilməmişdir.*	أن مصدر اللحوم و/أو منتجاتها حيوانات لم يتم تغذيتها بالبروتين الحيواني المصنع، باستثناء تلك من الأسماك.
	Meat derived from animals that were born and reared in country origin and from livestock that were officially registered at the competent authority of the exporting country. / *Ölkə mənşəli doğulmuş yetişdirilən heyvanlardan və ixracatçı ölkənin səlahiyyətli orqanlarında rəsmi qeydiyyata alınan heyvandarlıqdan alınan ət.*	أن اللحوم ناتجة من حيوانات ولدت ونشأت في بلد المنشأ من قطعان مسجلة رسمياً لدى الجهات المختصة في بلد المنشأ.
	The meat has been obtained from animals which have been reared in territory/ies [name]. / *Ət ərazilərdə yetişdirilən heyvanlardan əldə edilmişdir **[adı]***	تم إنتاج اللحم من حيوانات تربت في المقاطعة/ المقاطعات [اسم المقاطعة]
	The meat comes from animals which were not bred genetically modified or engineered in a way that does not occur naturally by multiplication and /or natural recombination. / *Ət, genetik cəhətdən dəyişdirilməmiş və ya çoxalma və / və ya təbii rekombinasiya yolu ilə təbii olaraq baş verməyəcək şəkildə hazırlanmayan heyvanlardan gəlir.*	مصدر اللحوم من حيوانات غير محوره وراثياً (معدلة) أو تم الحصول عليها عن طريق استخدام التقنية الحيوية الحديثة.
	The meat has been obtained from animals which have been transported from farms in comply with the (GSO 714 and 1400) requirements. / *Ət (GSO 714 və 1400) tələblərinə uyğun olaraq təsərrüfatlardan daşınan heyvanlardan əldə edilmişdir.*	أن يكون مصدر اللحم من حيوانات تم نقلها من المزارع بما يتوافق مع متطلبات المواصفات القياسية الخليجية رقم 714 و 1400.
	The carcass or its parts have been marked with a health mark in accordance with [GSO 996]. / *Cəmdək və ya onun hissələri [GSO 996] uyğun olaraq sağlamlıq işarəsi ilə qeyd edilmişdir.*	وجود العلامة الصحية (الختم) على الذبائح أو أجزاء الذبائح حسب المواصفة القياسية الخليجية 996
	The meat has been stored and transported in accordance with GSO 815 and GSO 323. / *Ət GSO 815 və GSO 323 standartlarına uyğun olaraq saxlanılıb və daşınmışdır.*	تم تخزين اللحوم ونقلها طبقا للمواصفات القياسية الخليجية GSO 815 و GSO 323
	The meat has been obtained separate from meat not conforming to the requirements set out in this certificate during all stages of its production, transport and storage. / *Ət, istehsal, daşınma və saxlanmanın bütün mərhələlərində bu sertifikatda göstərilən tələblərə uyğun olmayan ətdən ayrı alınmamışdır.*	تم إنتاج اللحم بمعزل تام عن أي لحوم لا تتوافق مع المتطلبات المنصوص عليها في هذه الشهادة خلال جميع مراحل الإنتاج والنقل والتخزين.
	I the undersigned, authorized person, certify that the good described above meets all the requirements mentioned in this certificate. / *Mən imzalanmış, səlahiyyətli şəxs yuxarıda təsvir olunan malın bu sertifikatda göstərilən bütün tələblərə cavab verdiyini təsdiqləyirəm.*	أنا الموقع أدناه المسئول المختص أفيد بأن البضاعة الواردة أوصافها أعلاه تستوفي جميع الشروط الصحية الواردة في الشهادة.

Authorized officer Name & Position / *Səlahiyyətli məmurun adı və vəzifəsi*

Name of the Responsible Department / *Məsul şöbənin adı*

Official Stamp / *Rəsmi möhr.*

Date: *Tarix*

اسم ووظيفة الشخص المختص

اسم الإدارة التي يتبع لها

الختم الرسمي

التاريخ:

Azərbaycan Respublikası Qida Təhlükəsizliyi Agentliyi • Food Safety Agency of the Republic of Azerbaijan •
Baş Dövlət Baytarlıq Müfəttişi
Chief Veterinary Officer

Galib Abdulaliyev,
Head of Animal Health Department of the Food Safety Agency of the Republic of Azerbaijan,
Chief Veterinary Officer

الهيئة العامة للغذاء والدواء
Saudi Food & Drug Authority

Conditions & Requirements for Importing Food to the Kingdom of Saudi Arabia

(Kingdom of Saudi Arabia)
Saudi Food & Drug Authority
Reviewed on May 2020

Table of Contents

Introduction:

The framework for regulating the import of food products into Kingdom of Saudi Arabia and the relevant requirements and conditions is based on article 7 under KSA Food Act, which states that:

"Imported food shall not be released prior to SFDA approval as laid down by the regulations, policies and procedures under this Act. SFDA shall be responsible for developing regulatory bylaws for controlling the clearance process of foodstuff intended for importation into the Kingdom of Saudi Arabia".

In addition to Article 3 (paragraph. 4) under Food Act bylaws which stipulates the following:

"Countries exporting their products to Kingdom of Saudi Arabia shall comply with the import conditions and requirements issued by SFDA".

Article 1: scope and definitions

Scope:

These requirements and conditions apply to all food products imported from the exporting countries into Kingdom of Saudi Arabia.

Purpose:

This document aims at the following:

1. Lay down the conditions and requirements, which must be met by the competent authorities in countries intending to export their food products to Kingdom of Saudi Arabia.

2. Provide assurances from competent authority (s) in exporting countries that the entities wishing to export their products to the Kingdom of Saudi Arabia comply with the regulations approved by the Kingdom related to human, animal or plant health.

3. Ensure food safety and facilitate movement of international trade.

Article 2: definitions

1. **Competent Authority:** the body/bodies responsible for the official food controls in the exporting countries.

2. **Food:** any material (raw, fresh, processed, or partially processed) intended for human consumption. It shall also include any substances used in the manufacturing preparation or treatment of food.

3. **Food Chain:** the different stages which food undergo from primary production to human consumption, including food importing, exporting, manufacturing, preparing, treatment, packaging, stocking, moving, possession, distribution, presenting for sale, selling and complimentary distribution.

4. **Food Establishment:** any entity of legal existence involved in food handling during any stage of the food chain, except for home kitchens.

5. **Technical Regulations:** Mandatory documents that describe food components, its manufacturing and producing methods and the rules that control such properties. They also include terms, sings, packaging, illustrative data or food label related to food or its production method.

6. **Sanitary and Environmental Requirements:** instructions, rules or guidelines, which must be maintained when handing food to ensure the safety of health and environment as stipulated by the relevant technical regulations.

7. **Primary Production:** it refers to breeding and rearing farm animals prior to slaughter, in addition to the cultivation of primary products, which may include harvesting and milking. It also refers to hunting and fishing, collecting and producing crustaceans, and harvesting wild plants.

8. **Risks:** potential factors indicating the level of negative effect on human health as a result of exposure to a certain food source.

9. **Hazard:** a biological, chemical or physical factor present in food or a state, which may render food harmful or detrimental to human health.

10. **Food traceability:** measures or procedures followed to help track any food or component of food through all stages of food chain.

11. **Inspection:** a set of checks and controls on food handling throughout the stages of food production to ensure compliance with the regulatory requirements.

12. **The Kingdom:** the Kingdom of Saudi Arabia.

Chapter 1
Import Conditions

Article 3: Food Controls in the Exporting Country

1. SFDA has the right to officially audit the operational procedures of the competent authority/authorities in the exporting country to verify that the legislations and regulatory systems in that country are in compliance with KSA food law, technical regulations, standards, guidelines, directives and any legislations related to KSA animal and plant health code.

2. SFDA may either carry out the audit or delegate the competent authority/authorities in the exporting country (or any third party, private or public, as per to Article 43 under Saudi Food Act) to do so in order to check in particular:

2.1 The availability of applicable legislations in the exporting country concerning food safety, animal and plant health, plant protection and animal welfare and products, the use of drugs, animal feeds and their byproducts.

2.2 The organization of the exporting country's competent authorities, their powers and independence, the supervision to which they are subject and the authority they have to effectively enforce the law.

2.3 That the control systems are maintained and documented.

2.4 That the competent authorities have sufficient resources, including diagnostic facilities, to perform their missions.

2.5 The training programs for the inspectors or staff involved in the official controls.

2.6 The animal and plant health situation and zoonosis.

2.7 The notification system for outbreaks of animal and plant diseases to the relevant international bodies (where applicable).

2.8 The official controls on the import of animals, plants and their products in the exporting country, and to which extent the SPS and animal welfare standards are applied without compromising consumers' health, the implementation of the appropriate protection measures to safeguard food against the potential sources of risks related to the surrounding environmental factors, agricultural inputs or any other materials used in the primary production.

2.9 The assurances which the exporting competent authorities can provide regarding compliance with, or equivalence to, KSA import requirements.

3. SFDA may demand that the exporting country provide information in relation with the controls stated above in paragraph (1), and , where necessary, the records which verify the implementation of such controls.

Chapter 2

Import Requirements

Article 4: General Import Requirements:

The SFDA may request accurate and up-to-date information on the general organization and management of food, veterinary, sanitary and phytosanitary control systems applied in the exporting countries intending to export products to KSA. This may include:

1.1. Any existing, new or proposed sanitary or phytosanitary regulations.

1.2. Control and inspection procedures, as well as relevant pesticide or food additive tolerance levels and regulations.

1.3. Any information related to the food chain.

4.1 Residue Plans for Foods of Animal Origin

All countries intending to export their products of animal origin to KSA shall have in place an effective residue control plans for banned or controlled chemicals, antibiotics, hormones or/and other contaminants in line with SFDA requirements. These plans shall be in place for the particular type of food intended to be exported to KSA.

4.2 Residue Plans for Foods of Plant Origin and Their Products

The SFDA may demand official guarantees from the central competent authority in the exporting country regarding the use or the restriction of certain chemicals involved in the manufacture of foods of plant origin, or regarding the composition (e.g. absence of genetically modified organisms (GMOs)) of the product and/or the post-harvest treatment.

4.3: Traceability of Foods of Animal Origin and Their Products

All countries intending to export their food products of animal origin to KSA shall have in place a traceability system for such products through all the stages of food chain.

4.4 Temporary exemption

The SFDA may allow exemptions from the conditions set out in paragraph 4.1 to 4.3 and for a period that it determines at the request of the exporting country or a request from the importer.

4.5 Certification of Food Products of Animal Origin and Their Products

1.Halal Slaughter Certificates:

1.1. Consignments of whole meat and their parts intended for exportation to KSA shall be accompanied by halal slaughter certificates attesting that the animals are slaughtered according to the requirements as laid down by by the relevant GSO standards and regulations.

1.2. The halal slaughter certificate accompanying consignments of whole meat and their parts destined for KSA market shall be issued from an Islamic center or society accredited by KSA bodies authorized for supervising Islamic Slaughter.

2. Halal Certificates

2.1. Consignments of products containing meat ingredients shall be accompanied by halal certificates as laid down by the relevant GSO standard specifications, which stipulate that such ingredients comply with KSA halal standards and regulations.

2.2. The halal certificates accompanying products containing meat ingredients shall be issued by the concerned Islamic centers or societies.

3. Health Certificates

3.1. Consignments of products of animal origin shall be accompanied by appropriate health certificates issued by the competent authority in the exporting country.

3.2. The SFDA shall have the right to put the exporting countries into different categories according to the outcome of risk assessments, the conditions under articles (1 thru 5) of this document, and as per the assurances submitted by each exporting country regarding the products intended for exportation to KSA.

3.3. The health certificate forms, as required by paragraph 3.1 and 3.2 under article 3, shall follow the SFDA health certificate or GSO health certificate model in terms of format and content, or shall be in a format to be determined by SFDA in case of absence of a SFDA model in the appendix 1.

Certification of processed Fruits, Vegetables and Grains

1. An official phytosanitary certificate shall be provided by the competent authority in the exporting country when importing fresh fruit and vegetables, and grains.
2. The format of the phytosanitary certificate shall follow the model set out by the concerned competent authority in KSA.

Chapter 3
SFDA Procedures

Article 5: SFDA Procedures:

1. The SFDA shall set detailed conditions and procedures for the import of food products from a country (or from areas/regions within the country) if such conditions and procedures are not provided for by KSA legislations. In addition, when necessary, the concerned KSA competent authority shall draw detailed conditions for animal health in coordination with SFDA. The purpose of these detailed conditions and procedures is to achieve the following:

1.1. To list the exporting countries from which certain products can be imported into KSA.

1.2. To design standard models for the health certificates accompanying food consignments.

1.3. To create specific import conditions (e.g. additional guarantees such as regionalization) tailored according to the type of product, animal or associated risks, taking into account the information provided by the exporting country. These specific import condition may apply to one or more products, one or more countries, one or more regions within the country.

2. The exporting country shall be added to the aforementioned list indicated in paragraph 1.1 under Article 5, only if all the required guarantees ensuring compliance or equivalence with KSA food law and animal health code are presented by the exporting country.

3. When designing or updating the above list, the following must be considered:

3.1. The exporting country's legislations on food safety, animal and plant health.

3.2. The structure, organization, official controls and jurisdictions of the competent authority in the exporting country, in addition to the guarantees it can provide to enforce the relevant legislations.

3.3. The existence of adequate official controls in the exporting country.

3.4. The efficiency and rapidity of the information exchange system on the presence of food risks.

3.5. The guarantees, which can be provided by the exporting countries to ensure that the requirements, met by food establishments, are in compliance or equivalence with KSA Food law.

3.6. Designing and timely updating a list for food establishments.

3.7. The establishments added to the list in paragraph 3.6 under Article 5 shall be subject to the efficient and periodical control of the competent authority in the exporting country.

Article 6: Import Requirements for Foods of Animal Origin:

1. Country List:

1.1. Without prejudice to the requirements of Articles 4, SFDA shall make a list of all countries approved, on health grounds, for exporting products of animal origin and other products to KSA, drawing upon relevant fact sheets and other information published by international entities. With respect to animal health, other KSA competent authorities shall be involved.

1.2. Where any country fails to meet the eligibility requirements for entry into the "country list", SFDA may issue import permits for food products on a case-by-case basis and upon request from the importer. Such permits may entail the provision of attestations from a responsible official body in the country of export.

2. Establishment List

2.1. SFDA may grant permission for food establishments to import products intended for human consumption to KSA, if such premises are approved to export their products by the recognized control authority in the exporting country.

2.2. Import from establishments, which are not granted SFDA approval, shall only be permitted if the requirements stated in paragraph 1.2 under article 6, are met.

Article 7: Imports Requirements for Foods of Plant Origin and their products:

1. The SFDA may require special conditions to be met by establishments processing food products of plant origin and other products and may allow import only from such establishments.

2. Import from establishments, which are not granted SFDA approval, shall only be permitted if the requirements stated in paragraph 1.2 under article 6, are met.

Article 8: Auditing the Competent Authorities in the Exporting Countries

1. The frequency of audits carried out by SFDA in the exporting countries shall depend on the following:

1.1. The risk assessments of products exported to the KSA;

1.2. The provisions of KSA legislations:

1.3. The quantity and nature of imports from the concerned country:

1.4. The results of controls carried out by SFDA or other official inspection services.

1.5. The regular inspection reports and other official controls on food products imported from the concerned exporting country;

1.6. The available information from SFDA or other official bodies in KSA.

1.7. The information received from internationally recognized bodies such as the World Health Organization (WHO), the Codex Alimentarius Commission and the World Organization for Animal Health (OIE), or from other sources;

1.8. The presence of outbreaks or emergencies, which may pose risk to public health.

1.9. The need for investigation and/or response to emergencies in each exporting countries.

2. The criteria used for the purpose of country risk assessment shall be left to the discretion of SFDA.

Appendix 1: Model of SFDA Health Certificate

الشـهادة الصحية لتصدير اللحـوم ومنتجاتها إلى المملكة العربية السعودية	Health Certificate for Export of Red Meat and Meat Products to the KSA
الرقم المرجعي للشهادة الصحية Certificate Reference No. مكان الإصدار Place of Issue تاريخ الإصدار Date of Issue	المرسل (المصدر) Consignor (Exporter) الاسم Name العنوان Address
الجهة الرقابية المختصة Competent/Certifying Authority العنوان Address	المرسل إليه (المستورد) Consignee (importer) الاسم Name العنوان Address
رمز الأيزو ISO code / بلد المنشأ Country of origin	
رمز الأيزو ISO code / بلد الوصول Country of Destination	
الشركة المعبأة (إن وجد) Packing Est. (if applicable) الاسم Name العنوان Address	الشركة الصانعة/المسلخ Producer/Slaughterhouse Est. الاسم Name العنوان Address
شهادة الذبح الحلال[1] Halal Slaughtering Certificate رقم الشهادة Certificate No:	مصدرها: Source:
بلد المغادرة/موقع التحميل Border of Loading/Country of Dispatch	بلد الوصول /منفذ الدخول Border of Entry/Country of Destination
الرقم التعريفي/هوية وسيلة النقل Conveyance Identification No.	وسيلة النقل Means of transport/conveyance جوي By Air ☐ بحري By Sea ☐ بري By Road ☐
درجة حرارة حفظ المادة الغذائية Temperature of Food product درجة حرارة الغرفة Ambient مبرد Chilled مجمد Frozen	

تم ترخيص البضائع لاستخدامها في: Commodities Certified for:

الاستهلاك الآدمي مباشرة: ☐ Human Consumption Directly: بعد معالجة إضافية ☐ After Further Process أخرى ☐ Other

توصيف وتصنيف الأغذية Identification of the Food Products

Name & Description of Food	HS-Code	Treatment Type	Brand Name	Production Date	Expiry Date	No Packages	Batch/Lot No.	Total Weight
اسم ووصف المادة الغذائية	بند التعرفة الجمركية	نوع المعالجة	العلامة التجارية	تاريخ الإنتاج	تاريخ الانتهاء	عدد الطرود	رقم التشغيلة/الدفعة	الوزن الكلي

الإفادات الصحية Health Attestations

أن اللحوم و/أو منتجاتها سليمة (آمنة) وصالحة للاستهلاك الآدمي	The meat and/or meat product are safe and fit for human consumption
تم ذبح الحيوانات في مسلخ مرخص ومعتمد من قبل الجهات المختصة في بلد المنشأ وموافق عليه من قبل الهيئة العامة للغذاء والدواء ويعمل تحت إشراف الجهة الرقابية المختصة بالدولة المصدرة.	Animals have been slaughtered in a slaughterhouse approved and under the supervision of the competent authority of the exporting country, and is approved by the Saudi Food and Drug Authority.
أن اللحـوم و/أو منتجاتهـا من حيوانات خضعت للفحـص قبل الذبح وبعده من قبل أطباء بيطريين تابعين للجهة الرقابية المختصة في بلد المنشأ.	The meat and/or meat product from animals that have been subjected to ante-mortem and post- mortem inspection by veterinarians assigned by the Competent Authority of the country of origin.

The meat and/or meat product was handled at an establishment that has been subjected to inspections by the competent authority and implements a food safety management system based on HACCP principles or an equivalent system.	تم إجراء عمليات تداول اللحوم و/أو منتجاتها في منشأه خاضعة للرقابة من قبل الجهة الرقابية المختصة، وتطبق نظام إدارة سلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يماثله.
Good veterinary practices have been applied in the use of veterinary medicines (including growth promoters) and agriculture chemicals in live animals, and any residues of hormones, antibiotics, pesticides, heavy metals or any other pollutants in meat and/or meat product comply with (GSO 382,GSO 2481, GSO 1016, GSO CODEX STAN 193).	تم تطبيق الممارسات البيطرية الجيدة في استخدام الأدوية البيطرية (بما فيها محفزات النمو) والكيماويات الزراعية في الحيوانات الحية, وأن أي متبقيات من الهرمونات، المضادات الحيوية، المبيدات، المعادن الثقيلة أو غيرها من الملوثات في اللحوم و/أو منتجاتها متوافقة مع المتطلبات الخليجية GSO 382, GSO 2481, GSO 1016, GSO CODEX STAN 193
The meat has been derived from healthy animals that have no apparent evidence of any contagious and/or infectious disease as listed by (OIE).	أن مصدر اللحوم هو حيوانات خالية من الأمراض المعدية و/أو الوبائية والمتضمنة في قوائم المنظمة الدولية للصحة الحيوانية (OIE).
The meat and/or meat product originates from animals that have not been slaughtered for the purpose of disease eradication or disease control.	أن مصدر اللحوم و/أو منتجاتها لم يتم ذبحها بقصد القضاء على الأمراض أو التحكم فيها.
The meat and/or meat product has not been derived from animals fed on processed animal protein, excluding fishmeal.	أن مصدر اللحوم و/أو منتجاتها حيوانات لم يتم تغذيتها بالبروتين الحيواني المصَنع، باستثناء تلك من الأسماك.
Meat derived from animals that were born and reared in country origin and from livestock that were officially registered at the competent authority of the exporting country.	أن اللحوم ناتجة من حيوانات ولدت ونشأت في بلد المنشأ من قطعان مسجلة رسمياً لدى الجهات المختصة في بلد المنشأ.
The meat has been obtained from animals which have been reared in territory/ies [name]	تم إنتاج اللحم من حيوانات تربت في المقاطعة/ المقاطعات [اسم المقاطعة]
The meat comes from animals which were not bred genetically modified or engineered in a way that does not occur naturally by multiplication and /or natural recombination.	مصدر اللحوم من حيوانات غير محوره وراثياً (معدلة(أو تم الحصول عليها عن طريق استخدام التقنية الحيوية الحديثة.
The meat has been obtained from animals which have been transported from farms in comply with the (GSO 714 and 1400) requirements	أن يكون مصدر اللحم من حيوانات تم نقلها من المزارع بما يتوافق مع متطلبات المواصفات القياسية الخليجية رقم 714 و 1400.
The carcass or its parts have been marked with a health mark in accordance with [GSO 996].	وجود العلامة الصحية (الختم) على الذبائح أو أجزاء الذبائح حسب المواصفة القياسية الخليجية 996
The meat has been stored and transported in accordance with GSO ٨١٥ and GSO 323.	تم تخزين اللحوم ونقلها طبقا للمواصفات القياسية الخليجية .GSO 815 و GSO 323
The meat has been obtained separate from meat not conforming to the requirements set out in this certificate during all stages of its production, transport and storage.	تم إنتاج اللحم بمعزل تام عن أي لحوم لا تتوافق مع المتطلبات المنصوص عليها في هذه الشهادة خلال جميع مراحل الإنتاج والنقل والتخزين.
I the undersigned, authorized person, certify that the good described above meets all the requirements mentioned in this certificate	أنا الموقع أدناه المسئول المختص أفيد بأن البضاعة الواردة أوصافها أعلاه تستوفي جميع الشروط الصحية الواردة في الشهادة.
Authorized officer Name & Position Name of the Responsible Department Official Stamp Date:	اسم ووظيفة الشخص المختص اسم الإدارة التي يتبع لها الختم الرسمي التاريخ:

With regard to BSE:

For export from countries classified by the (OIE) as having negligible BSE risk:

1. That the country or region comply with the requirements mentioned in Clause No. (11.4.3) at the (OIE).

2. That the meat and meat products are from bovine subjected to ante- and post-mortem inspection.

3. That meat and meat products are produced from bovine born after the date from which the ban on the use of animal protein (meat-and-bone meal) derived from ruminants had been enforced.

For export from countries classified by the (OIE) as Controlled BSE risk:

1. That the country or region comply with the requirements mentioned in Clause No. (11.4.4) at the (OIE).

2. That the meat and meat products are from bovine subjected to ante- and post-mortem inspection.

3. That meat and meat products were derived from bovine that were not subjected to a stunning process, prior to slaughter, with a device injecting compressed air or gas into the cranial cavity, or to a pithing process;

4. Meat and meat products and meat were produced / handled in a manner that ensures such products do not contain and have not been contaminated with:

- Tonsils and distal ileum of carcasses for all ages.
- The brain, eyes, spinal cord, skull and vertebral column from cattle that are over (30) months.
- Mechanically separated meat from the skull and vertebral column from bovine over (30) months of age.

For export from countries classified by the (OIE) as Undetermined BSE risk:

1. Meat and meat products should be from bovine:

- not fed on animal protein (meat-and-bone meal or greaves) from ruminants.

- passed ante- and post-mortem inspections.

- were not subjected to a stunning process, prior to slaughter, with a device injecting compressed air or gas into the cranial cavity, or to a pithing process;

2. Meat and its products have been produced / handled in a manner that ensures that such products do not contain and have not been contaminated with:

• Tonsils and Distal ileum of carcasses for all ages.

• Brain, eyes, spinal cord, skull and vertebral column, from cattle more than (12) months old.

• nervous and lymphatic tissues exposed during the deboning process,

• Mechanically separated meat from the skull and vertebral column from cattle over 12 months of age.

With regard to FMD:

All consignments should be in compliance with the requirements stipulated in Chapter (8.8) of the OIE Land Terrestrial Constitution (OIE).

الشـهادة الصحيـة لتصديـر لحـوم الدواجـن ومنتجاتها إلى المملكة العربية السعودية

Health Certificate for Export of Poultry Meat And Poultry Meat Products to the KSA

الرقم المرجعي للشهادة الصحية Certificate Reference No.	
مكان الإصدار Place of Issue	
تاريخ الإصدار Date of Issue	
الجهة الرقابية المختصة Competent/Certifying Authority	
العنوان Address	
رمز الأيزو ISO code	بلد المنشأ Country of origin
رمز الأيزو ISO code	بلد الوصول Country of Destination
الشركة المعبأة (إن وجد) Packing Est. (if applicable)	
الاسم Name	
العنوان Address	
شهادة الذبح الحلال[2] Certificate No:	
رقم الشهادة	
بلد المغادرة/موقع التحميل Border of Loading/Country of Dispatch	
الرقم التعريفي/هوية وسيلة النقل Conveyance Identification No.	
درجة حرارة حفظ المادة الغذائية Temperature of Food product	
درجة حرارة الغرفة Ambient	
مبرد Chilled	
مجمد Frozen	

المرسل (المصدر) Consignor (Exporter)	
الاسم Name	
العنوان Address	
المرسل إليه (المستورد) Consignee (importer)	
الاسم Name	
العنوان Address	
الشركة الصانعة/المسلخ Producer/Slaughterhouse Est.	
الاسم Name	
العنوان Address	
مصدرها: Halal Slaughtering Certificate Source:	
بلد الوصول /منفذ الدخول Border of Entry/Country of Destination	
وسيلة النقل Means of transport/conveyance	
جوي By Air ☐	
بحري By Sea ☐	
بري By Road ☐	

تم ترخيص البضائع لاستخدامها في: Commodities Certified for:

الاستهلاك الآدمي مباشرة: ☐ Human Consumption Directly: بعد معالجة إضافية ☐ After Further Process أخرى ☐ Other

توصيف وتصنيف الأغذية Identification of the Food Products

Name & Description of Food	HS-Code	Treatment Type	Brand Name	Production Date	Expiry Date	No Packages	Batch/Lot No.	Total Weight
اسم ووصف المادة الغذائية	بند التعرفة الجمركية	نوع المعالجة	العلامة التجارية	تاريخ الإنتاج	تاريخ الانتهاء	عدد الطرود	رقم التشغيلة/الدفعة	الوزن الكلي

الإفادات الصحية Health Attestations

أن لحوم الدواجن و/أو منتجاتها سليمة (آمنة) وصالحة للاستهلاك الآدمي	The poultry meat and/or poultry meat products are safe and fit for human consumption
تم ذبح الطيور في مسلخ مرخص ومعتمد من قبل الجهات المختصة في بلد المنشأ وموافق عليه من قبل الهيئة العامة للغذاء والدواء ويعمل تحت إشراف الجهة الرقابية المختصة بالدولة المصدرة.	The birds have been slaughtered in a slaughterhouse approved and under the supervision of the competent authority of the exporting country, and is approved by the Saudi Food and Drug Authority.
أن لحوم الدواجن و/أو منتجاتها من طيور خضعت للفحص قبل الذبح وبعده من قبل أطباء بيطريين تابعين للجهة الرقابية المختصة في بلد المنشأ.	The poultry meat and/or poultry meat product from birds that have been subjected to ante-mortem and post- mortem inspection by veterinarians assigned by the Competent Authority of the country of origin.

The poultry meat and/or poultry meat product was handled at an establishment that has been subjected to inspections by the competent authority and implements a food safety management system based on HACCP principles or an equivalent system.	تـم إجـراء عمليات تـداول لحوم الدواجـن و/أو منتجاتها في منشـأه خاضعة للرقابـة من قبل الجهة الرقابية المختصة، وتطبق نظام إدارة سـلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يماثله.
Good veterinary practices have been applied in the use of veterinary medicines (including growth promoters) and agriculture chemicals in live animals, and any residues of hormones, antibiotics, pesticides, heavy metals or any other pollutants in meat and/or meat product comply with (GSO ٣٨٢,GSO ٢٤٨١, GSO ١٠١٦, GSO CODEX STAN ١٩٣).	تم تطبيق الممارسـات البيطرية الجيدة في اسـتخدام الأدوية البيطرية (بما فيهـا محفـزات النمو) والكيماويـات الزراعية فـي الحيوانات الحيـة, وأن أي متبقيـات من الهرمونـات، المضادات الحيوية، المبيـدات، المعادن الثقيلة أو غيرهـا مـن الملوثـات فـي اللحـوم و/أو منتجاتهـا متوافقة مـع المتطلبات الخليجية GSO 382, GSO 2481, GSO 1016, GSO CODEX STAN 193
The poultry meat and/or poultry meat product has been derived from healthy birds that have no apparent evidence of any contagious and/or infectious disease as listed by (OIE).	أن مصدر لحوم الدواجن و/أو منتجاتها هي طيور خالية من الأمراض المعدية و/أو الوبائيـة والمتضمنـة فـي قوائم المنظمـة الدولية للصحـة الحيوانية (OIE).
The poultry meat and/or poultry meat product originates from birds that have not been slaughtered for the purpose of disease eradication or disease control.	أن مصـدر لحـوم الدواجـن و/أو منتجاتهـا لم يتـم ذبحها بقصـد القضاء على الأمراض أو التحكم فيها.
The poultry meat and/or poultry meat product has not been derived from birds fed on processed animal protein, excluding fishmeal.	أن مصـدر لحـوم الدواجـن و/أو منتجاتهـا طيـور لم يتـم تغذيتهـا بالبروتين الحيواني المصنع، باستثناء تلك من الأسماك.
The Poultry have been kept in a country or zone free from infection with Newcastle disease since they were hatched or for at least the past 21 days	أن تكون الدواجن بقيت منذ فقسها أو خلال الـ 21 يوماً الأخيرة على الأقل في بلد أو منطقة خاليه من مرض نيوكاسل.
The poultry meat has been obtained from poultry that during transport to the slaughterhouse, did not come into contact with poultry infected with highly pathogenic avian influenza or Newcastle disease or any other notifiable diseases included in the OIE list.	أن تكون لحوم الدواجن ومنتجاتها من طيور لم تحتك مع طيور مصابة بمرض إنفلونزا الطيور عالي الضراوة ومرض النيوكاسل أثناء نقلها للمنشأة، او أي مـن الامـراض الواجـب التبليغ عنها المذكـورة في قائمة المنظمـة العالمية للصحة الحيوانية OIE.
The meat has not been in contact at any time during slaughter, cutting, storage or transport with poultry or meat lower health status or prohibited by Islamic sharia.	عدم احتكاك اللحوم في أي وقت أثناء الذبح أو التقطيع أو التخزين أو النقل مع طيور أو لحوم ذات حالة صحية متدنية أو محرمة في الشريعة الإسلامية.
The poultry meat accompanied by a Halal slaughter certificate as per GSO 993 “Animal Slaughtering Requirements According to Islamic Rules” Issued by an Islamic center or Islamic association accredited by the Kingdom.	أن تكـون لحـوم الدواجـن ومنتجاتهـا مصحوبـة بشـهادة ذبـح حـلال حسـب المواصفـة القياسـية الخليجيـة رقم (993)" اشـتراطات تذكيـة الحيوان طبقاً للأحـكام الإسـلامية" صـادرة مـن مركـز أو جمعيـة إسـلامية معتمـدة لـدى المملكة.
The poultry meat or product thereof were prepared, handled, stored, and transported according to the GSO 323, GSO 713"	أن لحـوم الدواجـن و/أو منتجاتهـا تم تجهيزهـا وتداولهـا وتخزينها ونقلها وفقاً للمواصفات القياسية الخليجية GSO 323 و GSO 713.
The poultry meat were not from genetically modified birds and their products in accordance with GSO 2141.	أن لا تكـون لحـوم الدواجن ومنتجاتها من طيور محـوره وراثياً أو تم الحصول عليهـا عـن طريـق اسـتخدام التقنيـة الحيويـة الحديثـة وفقـا للمواصفـة القياسية الخليجية GSO 2141
The poultry meat derived from birds that were officially registered at the competent authority of the exporting country	أن لحـوم الدواجـن ناتجـة من دواجن مسـجلة رسـمياً لـدى الجهـة الرقابية المختصة بالدولة المصدرة.
I the undersigned, authorized person, certify that the good described above meets all the requirements mentioned in this certificate	أنـا الموقـع أدنـاه المسـئول المختص أفيد بأن البضاعـة الـواردة أوصافها أعلاه تستوفي جميع الشروط الصحية الواردة في الشهادة.
Authorized officer Name & Position Name of the Responsible Department Official Stamp Date:	اسم ووظيفة الشخص المختص اسم الإدارة التي يتبع لها الختم الرسمي التاريخ:

With regard to Avian Influenza (AI):

The poultry meat and its products comes from region(s)/ territory, which is free from highly pathogenic avian influenza, or has been processed to ensure the destruction of avian influenza virus in accordance with referring article in Terrestrial Animal Health Code and the necessary precautions were taken to avoid contact of the products with any source of avian influenza virus

الشـهادة الصحية لتصدير المنتجات البحرية ذات أصل حيواني إلى المملكة العربية السعودية	Health Certificate for Export of Products of Aquatic Animal Origin to the Kingdom of Saudi Arabia (KSA)
الرقم المرجعي للشهادة الصحية Certificate Reference No. مكان الإصدار Place of Issue تاريخ الإصدار Date of Issue	المرسل (المصدر) Consignor (Exporter) الاسم Name العنوان Address
الجهة الرقابية المختصة Competent/Certifying Authority العنوان Address	المرسل إليه (المستورد) Consignee (importer) الاسم Name العنوان Address
رمز الأيزو ISO code / بلد المنشأ Country of origin	
رمز الأيزو ISO code / بلد الوصول Country of Destination	
الشركة المعبأة (إن وجد) Packing Est. (if applicable) الاسم Name العنوان Address	الشركة الصانعة/المسلخ Producer/Slaughterhouse Est. الاسم Name العنوان Address
شهادة الذبح الحلال[3] Certificate No: رقم الشهادة	مصدرها: Halal Slaughtering Certificate Source:
بلد المغادرة/موقع التحميل Border of Loading/Country of Dispatch	بلد الوصول /منفذ الدخول Border of Entry/Country of Destination
الرقم التعريفي/هوية وسيلة النقل Conveyance Identification No.	وسيلة النقل Means of transport/conveyance جوي By Air ☐ بحري By Sea ☐ بري By Road ☐
درجة حرارة حفظ المادة الغذائية Temperature of Food product درجة حرارة الغرفة Ambient مبرد Chilled مجمد Frozen	

تم ترخيص البضائع لاستخدامها في: Commodities Certified for:

الاستهلاك الآدمي مباشرة: ☐ Human Consumption Directly: بعد معالجة إضافية ☐ After Further Process أخرى ☐ Other

توصيف وتصنيف الأغذية Identification of the Food Products

Name & Description of Food	HS-Code	Treatment Type	Brand Name	Production Date	Expiry Date	No Packages	Batch/Lot No.	Total Weight
اسم ووصف المادة الغذائية	بند التعرفة الجمركية	نوع المعالجة	العلامة التجارية	تاريخ الإنتاج	تاريخ الانتهاء	عدد الطرود	رقم التشغيلة/الدفعة	الوزن الكلي

الإفادات الصحية Health Attestations

أن المنتجات البحرية سليمة (آمنة) وصالحة للاستهلاك الآدمي.	The products of aquatic animal origin are safe and fit for human consumption.
أن مصـدر المنتجـات البحريـة ذات الأصـل الحيوانـي من فصائل غير سـامة ولا تُسبب أي علامات مرضية.	The products of aquatic animal origin are derived from non-toxic species that do not cause any sign of disease.
فـي حال تربيـة الأحياء البحريـة ذات الأصـل الحيواني ضمن مـزارع أو مناطق إنتـاج بحرية، فإن هـذه المناطق خاضعة للرقابة علـى المتطلبات الصحية من قبل الجهة الرقابية المختصة في بلد المنشأ.	Where aquatic animals are grown in farms or aquaculture production areas, hygiene requirements are under the control of the competent authority of the country of origin.

The aquatic animals have been fed from feed that is produced in compliance with GMP & HACCP principles or its equivalent and is free from any physical, chemical or biological contaminants that are prohibited internationally.	تـم تغذيـة الأحيـاء البحريـة ذات الأصـل الحيوانـي علـى أعلاف صنعـت وفقاً لمتطلبات التصنيع الجيد ونظام تحليل المخاطر والتحكم بالنقاط الحرجة أو ما يكافـؤه وخاليـة من أية ملوثات فيزيائية أو كيميائيـة أو بيولوجية محظورة دولياً.
The products of aquatic animal origin were handled in an establishment that has been subjected to inspection by the competent authority of the country of origin and implements a food safety management system based on HACCP principles or an equivalent system.	تـم إجـراء عمليات تداول المنتجـات البحرية ذات الأصل الحيواني في منشـأة خاضعـة للرقابـة من قبل الجهـة الرقابيـة المختصة في بلد المنشـأ، وتطبق نظام إدارة سلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يماثله.
The products of aquatic animal origin has been derived from healthy animals that have no apparent evidence of any contagious and/or infectious disease as listed by (OIE).	أن المنتجـات البحريـة المعـدة للاسـتهلاك الآدمـي لـم تظهر عليهـا أعراض الأمـراض المعديـة و/أو الوبائية والمتضمنـة في قوائم المنظمـة الدولية للصحة الحيوانية (OIE).
The aquatic animals which have never been fed with animal protein (with the exception of fish meals from different species than the cultured one), including meat, bone meal, greaves, or any other sources prohibited by the Islamic Sharia such as blood or derivatives of porcine.	أن الأحيـاء البحريـة ذات الأصـل الحيوانـي لم تتغـذ على أعـلاف تحتوي على بروتين حيواني (باسـتثناء مسـحوق السـمك شـريطة أن لا يكون من أسماك مسـتزرعة مـن نفـس الجنـس) بمـا فـي ذلـك اللحـوم ومسـحوق العظـام والدهون المجففة وأي مادة تتعارض مع الشـريعة الإسلامية مثل مشتقات الخنزير أو الدم.
The aquatic animals were not bred genetically modified or engineered in a way that does not occur naturally by multiplication and /or natural recombination.	أن تكـون الأحيـاء البحرية غيـر محورة وراثيـاً أو تم الحصـول عليها عن طريق استخدام التقنية الحيوية الحديثة.
The products of aquatic animal origin have been and handled in accordance with GSO 1694	تـم تـداول المنتجـات البحريـة ذات الأصـل الحيوانـي وفـق الطـرق الصحيـة السلمية بما يتوافق مع المواصفة القياسية الخليجية GSO 1694
The water (including the ice) use to process or transport the aquatic animals or its products is not contaminated with the pathogenic agent and comply with technical regulation GSO 149, and the processing prevents cross contamination of The products of aquatic animal origin.	الماء المسـتخدم فـي تصنيع ونقل الأحيـاء البحرية ومنتجاتها (يشـمل ذلك الثلـج) لا يحتوي علـى ملوثات ومطابق للائحة الفنية الخليجية GSO 149، كما أن الإنتاج يضمن عدم التلوث الخلطي للأحياء البحرية ومنتجاتها
The products of aquatic animal origin satisfies the conditions laid down in technical regulation GSO 1016 on microbiological criteria for foodstuffs.	أن المنتجـات البحريـة ذات الأصـل الحيوانـي مطابقة للائحة الفنيـة الخليجية رقم GSO 1016 الحدود الميكروبيولوجية للسلع والمواد الغذائية.
The products of aquatic animal origin satisfies the conditions laid down in technical regulation GSO 2481 on Maximum Residues Limits (MRLs) of Veterinary Drugs In Food.	أن المنتجـات البحريـة ذات الأصل الحيواني للائحة الفنيـة الخليجية رقم GSO 2481 الحدود القصوى المسموح بها من بقايا الأدوية البيطرية في الأغذية.
The products of aquatic animal origin has been obtained separate from meat not conforming to the requirements set out in this certificate during all stages of its production, transport and storage.	تـم إنتـاج المنتجـات البحرية ذات الأصـل الحيواني بمعزل تام عـن أي منتج لا يتوافـق مـع المتطلبـات المنصـوص عليهـا في هذه الشـهادة خـلال جميع مراحل الإنتاج والنقل والتخزين.

B1: Fish: The fish originate from a country/territory zone declared free from (EHN, IHNV, KHV, RSIV, SVCV, VHS, VHSV, SAV, ISAV, infection with A. invadans, or infection with G. salaris), in accordance with the relevant OIE Standard by the competent authority; or have been passed the following: 1.inactivation of the pathogenic agent according to OIE recommendation (Aquatic Animal Health Code) ;or 2.In the case of importation of fish fillets or steaks, which have been prepared and packaged for retail trade, the product should be (frozen or chilled).	ب1: الأسماك: أن مصدر الأسماك من دولة / مقاطعة أو منطقة خالية من الإصابة بأي من (EHN, IHNV, KHV, RSIV, SVCV, VHS, VHSV, SAV, ISAV, infection with A. invadans, أو infection with G. salaris) بما يتوافق مع متطلبات ما يعنيها من مواصفات المنظمة العالمية للصحة الحيوانية أو أن تكون الأسماك خضعت للإجراءات التالية: 1.تم تعطيل مسبب المرض وفقاً لما ورد في توصيات المنظمة العالمية للصحة الحيوانية (OIE). كود الأحياء المائية، أو: 2.في حال استيراد فيليه السمك أو شرائح السمك فإنه يجب أن يكون مجمد أو مبرد.
Fish incompliance with the following technical regulation: • For chilled fish GSO 380 • For frozen fish GSO 1753 • For frozen fish fillets GSO 1406	أن الأسماك مطابقة للوائح الفنية الخليجية التالية: • GSO 380 للأسماك المبردة • GSO 1753 للأسماك المجمدة • 1406 شرائح الأسماك المجمدة
B2: crustaceans : The crustaceans originate from a country/territory zone declared free from (WSD), (YHD), (TS), (IHHN), (IMN), (NHP), or (WTD) in accordance with the relevant OIE Standard by the Competent authority; or have been passed the following: 1.inactivation of the pathogenic agent according to OIE recommendation (Aquatic Animal Health Code) ;or 2.In the case of importation of shrimp, which have been prepared and packaged for retail trade, the product should be frozen peeled shrimp or decapod crustaceans (shell off, head off).	ب 2: القشريات: أن مصدر القشريات من دولة / مقاطعة أو منطقة خالية من كل من (مرض البقع البيضاء في الروبيان، مرض الرأس الأصفر في الروبيان، مرض متلازمة تورا في الروبيان، فيروس النخر الجلدي الدموي، مرض نخر العضلات، مرض النخر الكبدي البنكرياسي، مرض الذيل الأبيض بما يتوافق مع متطلبات ما يعنيها من مواصفات المنظمة العالمية للصحة الحيوانية، أو أن تكون القشريات خضعت للإجراءات التالية: 1.تم تعطيل مسبب المرض وفقاً لما ورد في توصيات المنظمة العالمية للصحة الحيوانية (OIE). كود الأحياء المائية، أو: 2.في حال كون القشريات (روبيان) فإنه يكون من روبيان مجمد منزوع القشرة والرأس ومحضر للأغراض التجارية.
Shrimp in compliance with the following technical regulation: • For chilled shrimp GSO 1361 • For frozen shrimp GSO 582	أن الروبيان مطابق للوائح الفنية الخليجية التالية: • GSO1361للروبيان المبرد • GSO 582 للروبيان المجمد
B3: Molluscs : The Molluscs originate from a country/territory zone declared free from (infection with AbHV, infection with B. exitiosa, infection with B. ostreae, infection with M. refringens, infection with P. marinus, infection with P. olseni, or infection with X. californiensis), in accordance with the relevant OIE Standard by the Competent authority; or have been passed the following: 1.inactivation of the pathogenic agent according to OIE recommendation (Aquatic Animal Health Code) ;or 2.in the case of importation of the following commodities that have been prepared and packaged for retail trade: • off the shell and eviscerated abalone meat ; • Mollusc meat • half-shell oysters; the product should be (chilled or frozen).	ب3: الرخويات: أن مصدر الرخويات من دولة / مقاطعة أو منطقة خالية من الإصابة بأي من (AbHV، B. exitiosa، B. ostreae، P. marinus، P. olseni، X. californiensis) بما يتوافق مع متطلبات ما يعنيها من مواصفات المنظمة العالمية للصحة الحيوانية، أو أن تكون الرخويات خضعت للإجراءات التالية: 1.تم تعطيل مسبب المرض وفقاً لما ورد في توصيات المنظمة العالمية للصحة الحيوانية (OIE). كود الأحياء المائية، أو: 2.في حال استيراد أحد المنتجات التالية: • الحلزونة البحرية (أذن البحر) منزوعة القشرة. • لحوم الرخويات • المحار بنصف قشرة يجب أن يكون مبرد أو مجمد.

The products of aquatic animal origin has been obtained from territory/state [name]	تم إنتاج المنتجات البحرية ذات الأصل الحيواني من المقاطعة/ ولاية [اسم المقاطعة]
I the undersigned, authorized person, certify that the good described above meets all the requirements mentioned in this certificate.	أنا الموقع أدناه المسئول المختص أفيد بأن البضاعة الواردة أوصافها أعلاه تستوفي جميع الشروط الصحية الواردة في الشهادة.
Authorized officer Name & Position Name of the Responsible Department Official Stamp Date:	اسم ووظيفة الشخص المختص اسم الإدارة التي يتبع لها الختم الرسمي التاريخ:

الشـهادة الصحية لتصدير عسـل النحل ومنتجات النحل إلى المملكة العربية السعودية

Health Certificate for Export of Honey & Bee Products to Kingdom of Saudi Arabia

الرقم المرجعي للشهادة الصحية Certificate Reference No.	
مكان الإصدار Place of Issue	
تاريخ الإصدار Date of Issue	
المرسل (المصدر) Consignor (Exporter)	
الاسم Name	
العنوان Address	
المرسل إليه (المستورد) Consignee (importer)	
الاسم Name	
العنوان Address	
الجهة الرقابية المختصة Competent/Certifying Authority	
العنوان Address	
رمز الأيزو ISO code	بلد المنشأ Country of origin
رمز الأيزو ISO code	بلد الوصول Country of Destination
الشركة المعبأة (إن وجد) Packing Est. (if applicable)	
الاسم Name	
العنوان Address	
شهادة الذبح الحلال[4] Certificate No:	
رقم الشهادة	
الشركة الصانعة/المسلخ Producer/Slaughterhouse Est.	
الاسم Name	
العنوان Address	
مصدرها: Halal Slaughtering Certificate Source:	
بلد المغادرة/موقع التحميل Border of Loading/Country of Dispatch	
بلد الوصول /منفذ الدخول Border of Entry/Country of Destination	
الرقم التعريفي/هوية وسيلة النقل Conveyance Identification No.	
وسيلة النقل Means of transport/conveyance	
جوي By Air ☐	
بحري By Sea ☐	
بري By Road ☐	
درجة حرارة حفظ المادة الغذائية Temperature of Food product	
درجة حرارة الغرفة Ambient	
مبرد Chilled	
مجمد Frozen	

تم ترخيص البضائع لاستخدامها في: Commodities Certified for:

الاستهلاك الآدمي مباشرة: ☐ Human Consumption Directly: بعد معالجة إضافية ☐ After Further Process أخرى ☐ Other

توصيف وتصنيف الأغذية Identification of the Food Products

Total Weight	Batch/Lot No.	No Packages	Expiry Date	Production Date	Brand Name	Treatment Type	HS-Code	Name & Description of Food
الوزن الكلي	رقم التشغيلة/الدفعة	عدد الطرود	تاريخ الانتهاء	تاريخ الإنتاج	العلامة التجارية	نوع المعالجة	بند التعرفة الجمركية	اسم ووصف المادة الغذائية

الإفادات الصحية Health Attestations

إن عسـل النحـل و/أو منتجـات النحـل سـليمة (أمنـة) وصالحـة للاسـتهلاك الادمي)	Honey and/or bee products are safe and fit for human consumption.
تـم إجـراء عمليات تداول عسـل النحل و/أو منتجات النحل في منشـأه غذائية (مناحـل) خاضعـة للرقابـة مـن قبـل الجهـة الرقابيـة المختصـة و/ أو الجهـة المخولة رسمياً، وتطبق نظام إدارة سلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يماثله.	The food product(s) was handled at an establishment that has been subjected to inspections by the competent authority and/or officially recognized body and implements a food safety management system based on HACCP principles or an equivalent system.
تطبق الجهة الرقابية المختصة و/ أو الجهة المخولة رسـمياً في بلد المنشأ خطـة رصـد للمتبقيات وفقا للمعاييـر الدولية الخاصة بعسـل النحل ومنتجات النحل الواردة في الدستور الغذائي (CODEX STAN 12-1981)).	The competent authority and/or officially authorized authority in the country of origin has implemented a plan to monitor residues in accordance with the international standards for Honey (CODEX STAN 12- 1981)

Honey Bee and its products come from apiaries, which are supervised and controlled by the competent authority.	إن عسل النحل ومنتجاته ترد من مناحل تشرف وتسيطر عليها الجهة الرقابية الرسمية.
Honey and/or bee products are produced in a country or a zone (of at least a 100 km radius) free from Aethina tumida infestation, and not subject to any restrictions associated with the infestation. or contain no live honey bees or bee brood, or has been subjected to a treatment at a temperature of –12 °C or lower for at least 24 hours or has been strained through a filter of pore size no greater than 0.42 mm.	إن عسل النحل و/أو منتجات النحل من بلد أو منطقة (بقطر 100 كم على الاقل) خالية من الاصابة بخنفساء النحل ، ولا تخضع لأي قيود مرتبطة بها. أو إن عسل النحل لا يحتوي على نحل حي أو بيض النحل أو تم معالجته عند 12- °س أو أقل لمدة ٢٤ ساعة أو أكثر. أو أنه تم ترشيحه عبر مصفاة لا يزيد حجم ثقوبها عن 0.42 mm.
Honey and/or bee products are Produced at a country or zone free from, European foulbrood. or have been found free of M. plutonius by a test method described in the relevant chapter of the Terrestrial manual. or have been processed to ensure the destruction of M. plutonius.	إن عسل النحل و/أو منتجات النحل من بلد خالية من الاصابة بالحضنة الاوروبي. أو أنه تأكد أن المواد المستوردة خالية من Melissococcus plutonius بعد فحصها بالطريقة المبينة في الفصل المتعلق بها في دليل اليابسة. أو أنه تمت معالجتها بطريقة تضمن القضاء على البكتيريا Melissococcus plutonius
Honey and/or bee products are Produced at a country or zone free from, American foulbrood. or have been found free from spore forms of P. larvae by a test method described in the relevant chapter of the terrestrial manual. or have been processed to ensure the destruction of both bacillary and spore forms of P. larvae.	إن عسل النحل و/أو منتجات النحل من بلد خالية من الاصابة بالحضنة الامريكي. أو أنه تأكد أن المواد المستوردة خالية من بوغات يرقات المرض بعد فحصها بالطريقة المبينة في دليل اليابسة. أو أنه تمت معالجتها بطريقة تضمن القضاء على عصيات وبوغات البكتيريا P. larvae.
Honey and/or bee products except (royal jelly) are Produced at a country free or zone from Varroa spp, or has been strained through a filter of pore size no greater than 0.42 mm; or frozen at core temperature of minus 12°C or less for at least 24 hours	أن عسل النحل او منتجاته وارد من مناحل في بلد أو منطقة خالية من سوسة الفاروا أو أنه تم ترشيحه عبر مصفاة لا يزيد حجم ثقوبها عن 0.42 mm؛ أو تجميد حتى 12- درجة من الداخل أو أقل لمدة 24 ساعة.
I the undersigned, authorized person, certify that the good described above meets all the requirements mentioned in this certificate.	أنا الموقع أدناه المسئول المختص أفيد بأن البضاعة الواردة أوصافها أعلاه تستوفي جميع الشروط الصحية الواردة في الشهادة.
Authorized officer Name & Position Name of the Responsible Department Official Stamp Date:	اسم ووظيفة الشخص المختص اسم الإدارة التي يتبع لها الختم الرسمي التاريخ:

الشـهادة الصحيـة لتصديـر الخضـار والفاكهـة المصنعة إلى المملكة العربية السعودية

Health Certificate for Export of Processed fruits and vegetables Products to KSA

الرقم المرجعي للشهادة الصحية Certificate Reference No.	
مكان الإصدار Place of Issue	
تاريخ الإصدار Date of Issue	
المرسل (المصدر) Consignor (Exporter)	
الاسم Name	
العنوان Address	
المرسل إليه (المستورد) Consignee (importer)	
الاسم Name	
العنوان Address	
الجهة الرقابية المختصة Competent/Certifying Authority	
العنوان Address	
رمز الأيزو ISO code / بلد المنشأ Country of origin	
رمز الأيزو ISO code / بلد الوصول Country of Destination	
الشركة المعبأة (إن وجد) Packing Est. (if applicable)	
الاسم Name	
العنوان Address	
الشركة الصانعة/المسلخ Producer/Slaughterhouse Est.	
الاسم Name	
العنوان Address	
شهادة الذبح الحلال[5] Halal Slaughtering Certificate	
رقم الشهادة Certificate No: / مصدرها: Source:	
بلد المغادرة/موقع التحميل Border of Loading/Country of Dispatch	
بلد الوصول /منفذ الدخول Border of Entry/Country of Destination	
الرقم التعريفي/هوية وسيلة النقل Conveyance Identification No.	
وسيلة النقل Means of transport/conveyance	
جوي By Air ☐	
بحري By Sea ☐	
بري By Road ☐	
درجة حرارة حفظ المادة الغذائية Temperature of Food product	
درجة حرارة الغرفة Ambient	
مبرد Chilled	
مجمد Frozen	

تم ترخيص البضائع لاستخدامها في: Commodities Certified for:

الاستهلاك الآدمي مباشرة: ☐ Human Consumption Directly: بعد معالجة إضافية ☐ After Further Process أخرى ☐ Other

توصيف وتصنيف الأغذية Identification of the Food Products

Name & Description of Food	HS-Code	Treatment Type	Brand Name	Production Date	Expiry Date	No Packages	Batch/Lot No.	Total Weight
اسم ووصف المادة الغذائية	بند التعرفة الجمركية	نوع المعالجة	العلامة التجارية	تاريخ الإنتاج	تاريخ الانتهاء	عدد الطرود	رقم التشغيلة/الدفعة	الوزن الكلي

الإفادات الصحية Health Attestations

إن الخضار والفاكهة المصنعة سليمة (آمنة) وصالحة للاستهلاك الآدمي.	The processed fruits and vegetables are safe and fit for human consumption.
تـم إجـراء عمليات تـداول الخضـار والفاكهـة المصنعة في منشـأة مسـجلة وخاضعـة للرقابـة مـن قبـل الجهـة الرقابيـة المختصـة، وتطبق نظـام إدارة سلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يماثله.	The processed fruits and vegetables was handled at a registered establishment that has been subjected to inspections by the competent authority and implements a food safety management system based on HACCP principles or an equivalent system.
أن يكـون مصـدر الخضار والفاكهة المصنعة من مزرعة أو مركز تجميع مسـجل وخاضع للرقابة من قبل الجهة الرقابية الحكومية المختصة في بلد المنشأ.	The source of processed fruits and vegetables are from registered farm or collection center controlled by the competent authority in the country of origin.

The processed fruits and vegetables shall be free from chemical and pesticides residue, or within allowable limits reference with the Gulf technical regulations (GSO 382) "Maximum Permissible Limits for Pesticides in Agricultural and Foodstuffs Part 1 and Part 2".	أن تكـون الخضـار والفاكهـة المصنعـة خالية مـن المـواد الكيميائيـة وبقايا المبيـدات أو فـي الحـدود المسـموح بها في اللائحـة الفنيـة الخليجية رقم (GSO 382) "الحـدود القصـوى المسـموح بهـا مـن بقايا مبيـدات الآفات في المنتجات الزراعية والغذائية- الجزء الأول والجزء الثاني).
The processed fruits and vegetables shall be free from microbiological or within the limits in the technical regulation (GSO 1016) "Microbiological Criteria For Foodstuffs"	أن تكـون الخضـار والفاكهـة المصنعـة خاليـة مـن التلـوث الميكروبيولوجي أوفـي الحـدود الميكروبيولوجيـة طبقاً للائحـة الفنية الخليجيـة (GSO 1016) "المعايير الميكروبيولوجية للسلع والمواد الغذائية".
The processed fruit and vegetables shall be in compliance with the Gulf technical regulations (GSO 123) "General requirements for fresh fruits and vegetables".	يجب أن تكون ارسـالية الخضار والفاكهـة المصنعة مطابقة لمتطلبات اللائحة الفنيـة الخليجية رقـم (GSO 123) "الاشـتراطات العامة للخضـروات والفاكهة الطازجة".
The plants, plant products shall have been inspected by the official officer from the competent authority and found free the quarantine pests and non-quarantine pests.	يجب أن تكون الخضار والفاكهة خضعت للفحص من قبل المختصين في الجهة الرقابية ووجدت خالية من آفات الحجر الزراعي والآفات غير الحجرية.
The processed fruits and vegetables are free from genetically modified materials or obtained through the use of modern biotechnology according to Gulf Standard GSO 2141	أن الخضار والفاكهة المصنعة خالية من المواد المعدلة وراثياً أو تم الحصول عليهـا عـن طريـق اسـتخدام التقنيـة الحيويـة الحديثـة وفقـا للمواصفـة القياسية الخليجية GSO 2141
The processed fruits and vegetables have been traded, transported, stored and packaged according to the technical requirements of GSO 323.	أن الخضـار والفاكهة المصنعة تم تداولها ونقلهـا وتخزينها وتعبئتها وفقاً للمتطلبات الفنية الواردة في المواصفة القياسية (GSO 323)
I the undersigned, authorized person, certify that the good described above meets all the requirements mentioned in this certificate	أنا الموقـع أدنـاه المسـئول المختـص أفيد بأن البضاعـة الـواردة أوصافها أعلاه تستوفي جميع الشروط الصحية الواردة في الشهادة.
Authorized officer Name & Position Name of the Responsible Department Official Stamp Date:	اسم ووظيفة الشخص المختص اسم الإدارة التي يتبع لها الختم الرسمي التاريخ:

الشهادة الصحية لتصدير بيض المائدة ومنتجاته المعدة للاستهلاك الآدمي إلى المملكة العربية السعودية

Health Certificate for Export of Table Eggs and Egg Products to the KSA

الرقم المرجعي للشهادة الصحية Certificate Reference No.	
مكان الإصدار Place of Issue	
تاريخ الإصدار Date of Issue	
الجهة الرقابية المختصة Competent/Certifying Authority	
العنوان Address	
رمز الأيزو ISO code	بلد المنشأ Country of origin
رمز الأيزو ISO code	بلد الوصول Country of Destination
الشركة المعبأة (إن وجد) Packing Est. (if applicable)	
الاسم Name	
العنوان Address	
شهادة الذبح الحلال[6] رقم الشهادة Certificate No:	
بلد المغادرة/موقع التحميل Border of Loading/Country of Dispatch	
الرقم التعريفي/هوية وسيلة النقل Conveyance Identification No.	
درجة حرارة حفظ المادة الغذائية Temperature of Food product	
درجة حرارة الغرفة Ambient	
مبرد Chilled	
مجمد Frozen	

المرسل (المصدر) Consignor (Exporter)	
الاسم Name	
العنوان Address	
المرسل إليه (المستورد) Consignee (importer)	
الاسم Name	
العنوان Address	
الشركة الصانعة/المسلخ Producer/Slaughterhouse Est.	
الاسم Name	
العنوان Address	
مصدرها: Halal Slaughtering Certificate Source:	
بلد الوصول /منفذ الدخول Border of Entry/Country of Destination	
وسيلة النقل Means of transport/conveyance	
جوي By Air ☐	
بحري By Sea ☐	
بري By Road ☐	

تم ترخيص البضائع لاستخدامها في: Commodities Certified for:

الاستهلاك الآدمي مباشرة: ☐ Human Consumption Directly: بعد معالجة إضافية ☐ After Further Process أخرى ☐ Other

توصيف وتصنيف الأغذية Identification of the Food Products

Name & Description of Food	HS-Code	Treatment Type	Brand Name	Production Date	Expiry Date	No Packages	Batch/Lot No.	Total Weight
اسم ووصف المادة الغذائية	بند التعرفة الجمركية	نوع المعالجة	العلامة التجارية	تاريخ الإنتاج	تاريخ الانتهاء	عدد الطرود	رقم التشغيلة/الدفعة	الوزن الكلي

الإفادات الصحية Health Attestations

إن البيض و/أو منتجاته سليم (آمن) وصالح للاستهلاك الآدمي	The eggs/ egg products are safe and fit for human consumption. The eggs/egg products were handled at an establishment that has
تـم إجـراء عمليات تداول البيض و/أو منتجاته في منشـأه خاضعة للرقابة من قبـل الجهـة الرقابية المختصـة في بلد المنشـأ، وتطبق نظام إدارة سـلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يماثله.	been subjected to inspections by the competent authority in the country of origin and implements a food safety management system based on HACCP principles or an equivalent system.
تم تطبيق الممارسـات البيطرية الجيدة في اسـتخدام الأدوية البيطرية (بما فيهـا محفـزات النمو) والكيماويـات الزراعية فـي الحيوانات الحيـة, وأن أي متبقيـات من الهرمونـات، المضادات الحيوية، المبيـدات، المعادن الثقيلة أو غيرهـا مـن الملوثـات فـي اللحـوم و/أو منتجاتهـا متوافقة مـع المتطلبات الخليجية GSO 382, GSO 2481, GSO 1016, GSO CODEX STAN 193	Good veterinary practices have been applied in the use of veterinary medicines (including growth promoters) and agriculture chemicals in live animals, and any residues of hormones, antibiotics, pesticides, heavy metals or any other pollutants in meat and/or meat product comply with (GSO 382,GSO 2481, GSO 1016, GSO CODEX STAN 193).

The egg and/or egg product has not been derived from birds fed on processed animal protein, excluding fishmeal.	أن مصدر البيض و/أو منتجاتها من طيور لم يتم تغذيتها بالبروتين الحيواني المصَنع، باستثناء مسحوق الأسماك.
The egg comes from region(s)/ territory, which is free from highly pathogenic avian influenza and Newcastle disease. or egg and its products has been processed to ensure the destruction of avian influenza virus and Newcastle disease in accordance with referring article in Terrestrial Animal Health Code and the necessary precautions were taken to avoid contact of the products with any source of avian influenza virus and Newcastle disease.	ان يكون مصدر البيض من منطقة أو مقاطعة خالية من مرض انفلونزا الطيور شديد الضراوة ومرض نيوكاسل، أو أنه تم معالجة البيض للتأكد من القضاء على فيروس إنفلونزا الطيور وفقاً للطرق الواردة في الكود الصحي لحيوانات اليابسة؛ وأنه تم اتخاذ جميع الاحتياطات اللازمة بعد المعالجة لمنع تلوث البضاعة بأي مصدر لفيروس إنفلونزا الطيور ومرض نيوكاسل.
The egg has been derived from healthy poultry that have no apparent evidence of any contagious and/or infectious disease as listed by (OIE).	أن مصدر البيض من طيور خالية من الأمراض المعدية و/أو الوبائية والمتضمنة في قوائم المنظمة الدولية للصحة الحيوانية (OIE).
The eggs were not from genetically modified birds and their products in accordance with GSO 2141.	ان لا يكون البيض ومنتجاتها من طيور محوره وراثياً أو تم الحصول عليها عن طريق استخدام التقنية الحيوية الحديثة وفقا للمواصفة القياسية الخليجية GSO 2141
I the undersigned, authorized person, certify that the good described above meets all the requirements mentioned in this certificate	أنا الموقع أدناه المسئول المختص أفيد بأن البضاعة الواردة أوصافها أعلاه تستوفي جميع الشروط الصحية الواردة في الشهادة.
Authorized officer Name & Position Name of the Responsible Department Official Stamp Date:	اسم ووظيفة الشخص المختص اسم الإدارة التي يتبع لها الختم الرسمي التاريخ:

Health Certificate for Export of Milk , and Milk Products To the KSA

لشـهادة الصحية لتصدير الحليب ومنتجاته إلى المملكة العربية السعودية

Consignor (Exporter) المرسل (المصدر)	Certificate Reference No. الرقم المرجعي للشهادة الصحية
Name الاسم	Place of Issue مكان الإصدار
Address العنوان	Date of Issue تاريخ الإصدار
Consignee (importer) المرسل إليه (المستورد)	Competent/Certifying Authority الجهة الرقابية المختصة
Name الاسم	Address العنوان
Address العنوان	Country of origin بلد المنشأ / ISO code رمز الأيزو
	Country of Destination بلد الوصول / ISO code رمز الأيزو
Producer/Slaughterhouse Est. الشركة الصانعة/المسلخ	Packing Est. (if applicable) الشركة المعبأة (إن وجد)
Name الاسم	Name الاسم
Address العنوان	Address العنوان
Halal Slaughtering Certificate Source: مصدرها:	Certificate No: شهادة الذبح الحلال[7] رقم الشهادة
Border of Entry/Country of Destination بلد الوصول /منفذ الدخول	Border of Loading/Country of Dispatch بلد المغادرة/موقع التحميل
Means of transport/conveyance وسيلة النقل By Air ☐ جوي By Sea ☐ بحري By Road ☐ بري	Conveyance Identification No. الرقم التعريفي/هوية وسيلة النقل
	Temperature of Food product درجة حرارة حفظ المادة الغذائية Ambient درجة حرارة الغرفة Chilled مبرد Frozen مجمد

Commodities Certified for: تم ترخيص البضائع لاستخدامها في:

Human Consumption Directly: ☐ الاستهلاك الآدمي مباشرة: After Further Process ☐ بعد معالجة إضافية Other ☐ أخرى

Identification of the Food Products توصيف وتصنيف الأغذية

Name & Description of Food	HS-Code	Treatment Type	Brand Name	Production Date	Expiry Date	No Packages	Batch/Lot No.	Total Weight
اسم ووصف المادة الغذائية	بند التعرفة الجمركية	نوع المعالجة	العلامة التجارية	تاريخ الإنتاج	تاريخ الانتهاء	عدد الطرود	رقم التشغيلة/الدفعة	الوزن الكلي

Health Attestations الإفادات الصحية

The milk/milk products are safe and fit for human consumption	إن الحليب و/أو منتجاته سليم (آمن) وصالح للاستهلاك الآدمي
The milk /milk products has been derived from healthy animals that are subject to the official veterinary service inspections in the country of origin.	أن مصـدر الحليـب و/أو منتجاتـه مـن حيوانـات سـليمة ومسـجلة وخاضعـة للفحص البيطري من قبل الجهة الرقابية المختصة في بلد المنشأ.
The milk/milk products was handled in an establishment that has been subjected to inspections by the competent authority and implements a food safety management system based on HACCP principles or an equivalent system.	تم إجراء عمليات تداول الحليب و/أو منتجاته في منشـأه خاضعة للرقابة من قبـل الجهـة الرقابيـة المختصة فـي بلد المنشـأ وتطبق نظام إدارة سـلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يماثله.

Good veterinary practices have been applied in the use of veterinary medicines (including growth promoters) and agriculture chemicals in live animals, and any residues of hormones, antibiotics, pesticides, heavy metals or any other pollutants in meat and/or meat product comply with (GSO 382,GSO 2481, GSO 1016, GSO CODEX STAN 193).	تم تطبيق الممارسات البيطرية الجيدة في استخدام الأدوية البيطرية (بما فيها محفزات النمو) والكيماويات الزراعية في الحيوانات الحية, وأن أي متبقيات من الهرمونات، المضادات الحيوية، المبيدات، المعادن الثقيلة أو غيرها من الملوثات في اللحوم و/أو منتجاتها متوافقة مع المتطلبات الخليجية GSO 382, GSO 2481, GSO 1016, GSO CODEX STAN 193
The consignment fulfill one of the conditions listed below: 1.The milk and unheated milk products come from animals from areas/ zones free from Foot-and- Mouth disease and Rift valley fever disease for at least the previous two years prior to export, and the milk were derived from animals which have been tested in accredited laboratory for recorded disease in the country of export which include (tuberculosis- brucellosis) with negative results. 2.The milk and milk products have been treated according to one of the special treatment methods of milk and milk products recommended by Codex Alimentarius.	أن الإرسالية تطابق أحد البنود الواردة ادناه: ان الحليب ومشتقاته غير المعاملة حراريا ناتجة من حيوانات من منطقة لم يسجل بها مرضي الحمى القلاعية وحمى الوادي المتصدع خلال السنتين السابقتين للتصدير على الأقل، وانه يوجد برنامج لمكافحة مرض السل ومرض البروسيلا وقد تم اختبار الحيوانات المنتجة للحليب في مختبر حكومي معتمد عن الامراض المسجلة في بلد التصدير والتي تشمل (مرض السل-مرض البروسيلا) وبنتائج سلبية. أن الحليب ومشتقاته قد تم معاملته وفقاً لإحدى طرق المعاملة الخاصة بالحليب ومشتقاته الواردة في دستور هيئة الغذاء الدولي.
The row milk has been obtained from animals under the control of the official veterinary service, which were in a country or part thereof that has been free of foot-and-mouth disease and of rinderpest for a period of at least 12 months prior to the date of this certificate, and where vaccination against foot-and-mouth disease has not been carried out during that period, belonging to holdings which were not under restrictions due to foot-and-mouth disease or rinderpest, and, subject to regular veterinary inspections to ensure that they satisfy the animal health conditions.	أن مصدر الحليب و/أو منتجاته من حيوانات تخضع للرقابة البيطرية الرسمية، وكانت في بلد أو جزء منها خالية من مرض الحمى القلاعية والطاعون البقري لمدة 12 شهراً على الأقل قبل تاريخ هذه الشهادة، وأنه لم يتم تحصينها ضد مرض الحمى القلاعية خلال تلك الفترة، وتنتمي إلى حضائر لم تكن خاضعة لقيود بسبب مرض الحمى القلاعية أو الطاعون البقري، وخضعت لفحوصات بيطرية منتظمة لضمان استيفاء شروط الصحة الحيوانية.
The milk and milk products has been derived from healthy animals that have no apparent evidence of any contagious and/or infectious disease as listed by (OIE).	أن مصدر الحليب هو حيوانات خالية من الأمراض المعدية و/أو الوبائية والمتضمنة في قوائم المنظمة الدولية للصحة الحيوانية (OIE).
The milk and milk products has been stored and transported in accordance with GSO 815 and GSO 323	تم تخزين الحليب و/أو منتجاته ونقلها طبقا للمواصفات القياسية الخليجية GSO 815 و GSO 323
The product satisfies the conditions laid down in GSO 1016 on microbiological criteria for foodstuffs.	المنتج يفي بالشروط المنصوص عليها في GSO 1016 على المعايير الميكروبيولوجية للمواد الغذائية.
The products packaging is first used and meets the hygienic-sanitary requirements established in GSO 1694.	يتم استخدام عبوات المنتجات لأول مرة وتفي بمتطلبات النظافة الصحية الموضوعة في المواصفة GSO 1694.
The milk and milk products were not from genetically modified animals and their products in accordance with GSO 2141.	أن لا يكون الحليب و/أو منتجاته من حيوانات محوره وراثياً أو تم الحصول عليها عن طريق استخدام التقنية الحيوية الحديثة وفقا للمواصفة القياسية الخليجية GSO 2141
Gulf Technical Regulation No (GSO 2500 "Additives Allowed for Use in Foodstuffs").	أن الحليب و/أو منتجاته مطابق للائحة الفنية الخليجية رقم (GSO 2500"المواد المضافة المسموح باستخدامها في المواد الغذائية").
I the undersigned, authorized person, certify that the good described above meets all the requirements mentioned in this certificate	أنا الموقع أدناه المسئول المختص أفيد بأن البضاعة الواردة أوصافها أعلاه تستوفي جميع الشروط الصحية الواردة في الشهادة.
Authorized officer Name & Position Name of the Responsible Department Official Stamp Date:	اسم ووظيفة الشخص المختص اسم الإدارة التي يتبع لها الختم الرسمي التاريخ:

الشـهادة الصحية النباتية للتصدير إلى المملكة العربية السعودية	Phytosanitary Certificate for Export To the KSA
رقم الشهادة : Certificate No	مكان الإصدار: Place of Issue:
إلى الجهة الرسـمية لوقاية النبات في البلد المستورد To: Plant Protection Organization Name:	مـن الجهـة الرسـمية لوقاية النبات في بلد المصدر From: Plant Protection Organization Name:
جهة التصدير وعنوانها Name & Address of Exporter	إسم وعنوان المستورد Name & Address of Consignee
وسيلة النقل: Mean of Transportation:	نقطة الدخول Point of Entry

وصف الشحنة Description of Consignment

إسم المنتج Name of Product	الأسماء العلمية للنبات Botanical Names of the Plant	عدد الطرود ووصفها Number & Description of Packages	العلامات المميزة Distinguishing Marks	جهة المنشأ Place of Origin	الكمية المعلنة (كجم) Quantity Declared (kg)

المعاملة للتطهير من التلوث و/أو الإصابة Disinfestations and/or Disinfection Treatment	
المعالجة: Treatment:	الكيماويات (المادة الفعالة) : Chemical (active ingredient):
التركيز: Concentration:	درجة الحرارة: Temperature:
معلومات أخرى: Additional Information:	التاريخ: Date:

الإفادات الصحية Health Attestations	
تصادق هذه الشـهادة على أن النباتات والمنتجات النباتية أو المواد الأخرى المذكـورة هنـا قـد تـم فحصهـا و/أو اختبارهـا وفقـا للإجـراءات المعتمـدة المناسبة ووجدت خالية من آفات الحجر الزراعي التي حددها البلد المستورد، وتتفق مع الوضع الحالي لمتطلبات الصحة النباتية لدى دول مجلس التعاون الخليجي، بما في ذلك تلك الآفات غير الحجرية الخاضعة للوائح.	This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures, and are considered to be free from the quarantine pests specified by the importing country and to conform with the current phytosanitary requirements of the GCC countries, including those for regulated non-quarantine pests.
إفادات صحية إضافية خاصة، إذا تطلب الأمر ذلك	Additional Health Attestations (Declarations) if deemed necessary
اسم ووظيفة الشخص المختص اسم الإدارة التي يتبع لها الختم الرسمي التاريخ:	Authorized officer Name & Position Name of the Responsible Department Official Stamp Date:

Health Certificate for Export of Assorted Food Products To the KSA

لشهادة الصحية لتصدير بالأغذية المنوعة إلى المملكة العربية السعودية

Consignor (Exporter)	المرسل (المصدر)
Name	الاسم
Address	العنوان

Consignee (importer)	المرسل إليه (المستورد)
Name	الاسم
Address	العنوان

Producer/Slaughterhouse Est.	الشركة الصانعة/المسلخ
Name	الاسم
Address	العنوان

Halal Slaughtering Certificate Source:	مصدرها:

Border of Entry/Country of Destination	بلد الوصول /منفذ الدخول

Means of transport/conveyance	وسيلة النقل
By Air ☐	جوي
By Sea ☐	بحري
By Road ☐	بري

Certificate Reference No.	الرقم المرجعي للشهادة الصحية
Place of Issue	مكان الإصدار
Date of Issue	تاريخ الإصدار

Competent/Certifying Authority	الجهة الرقابية المختصة
Address	العنوان

Country of origin	بلد المنشأ	ISO code	رمز الأيزو
Country of Destination	بلد الوصول	ISO code	رمز الأيزو

Packing Est. (if applicable)	الشركة المعبأة (إن وجد)
Name	الاسم
Address	العنوان

Certificate No:	شهادة الذبح الحلال رقم الشهادة

Border of Loading/Country of Dispatch	بلد المغادرة/موقع التحميل

Conveyance Identification No.	الرقم التعريفي/هوية وسيلة النقل

Temperature of Food product	درجة حرارة حفظ المادة الغذائية
Ambient	درجة حرارة الغرفة
Chilled	مبرد
Frozen	مجمد

Commodities Certified for: تم ترخيص البضائع لاستخدامها في:

Human Consumption Directly: ☐ الاستهلاك الآدمي مباشرة: After Further Process ☐ بعد معالجة إضافية Other ☐ أخرى

Identification of the Food Products توصيف وتصنيف الأغذية

Name & Description of Food	HS-Code	Treatment Type	Brand Name	Production Date	Expiry Date	No Packages	Batch/Lot No.	Total Weight
اسم ووصف المادة الغذائية	بند التعرفة الجمركية	نوع المعالجة	العلامة التجارية	تاريخ الإنتاج	تاريخ الانتهاء	عدد الطرود	رقم التشغيلة/الدفعة	الوزن الكلي

Health Attestations الإفادات الصحية

Food products are safe and fit for human consumption	إن المنتجات الغذائية سليمة (آمنة) وصالحة للاستهلاك الآدمي
The food product(s) was handled at an establishment that has been subjected to inspections by the competent authority and/or officially recognized body and implements a food safety management system based on HACCP principles or an equivalent system.	تم إجراء عمليات تداول للمنتجات الغذائية في منشأه غذائية خاضعة للرقابة من قبل الجهة الرقابية المختصة و/ أو الجهة المخولة رسمياً، وتطبق نظام إدارة سلامة الغذاء استناداً إلى مبادئ نظام الهاسب أو ما يماثله.
Additional Health Attestations (Declarations) if deemed necessary	إفادات صحية إضافية خاصة، إذا تطلب الأمر ذلك

Authorized officer Name & Position	اسم ووظيفة الشخص المختص
Name of the Responsible Department	اسم الإدارة التي يتبع لها
Official Stamp	الختم الرسمي
Date:	التاريخ:

بالأهـــــم نهتـــــم

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية

GCC STANDARDIZATION ORGANIZATION (GSO)

مواصفة عامة للملوثات والسموم في الأغذية

General Standard for contaminants & toxins in food

تقـديــم

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية هي هيئة إقليمية تضم في عضويتها الأجهزة الوطنية للمواصفات والمقاييس في دول الخليج العربية ، ومن مهام الهيئة إعداد المواصفات القياسية واللوائح الفنية الخليجية بواسطة لجان فنية متخصصة. وقد قامت هيئة التقييس لدول مجلس التعاون لدول الخليج العربية ضمن برنامج عمل اللجنة الفنية رقم ( ) " للجنة الخليجية الفرعية للمواد المضافة وملوثات الأغذية " بتحديث المواصفة القياسية الخليجية العامة للملوثات والسموم في الأغذية". قامت المملكة العربية السعودية بإعداد مشروع هذه المواصفة . وقد اعتمدت هذه المواصفة كلائحة فنية خليجية وذلك في اجتماع مجلس إدارة الهيئة رقم ( ) ، الذي عقد بتاريخ / / هـ - الموافق / / م.

Foreword

GCC Standardization Organization (GSO) is a regional Organization which consists of the National Standards Bodies of GCC member States. One of GSO main functions is to issue Gulf Standards /Technical regulations through specialized technical committees (TCs).

GSO through the technical program of committee TC No.(..) " Technical subcommittee for standards of food additives and contaminants" has prepared of GSO "General Standard for contaminants & toxins in food". The Draft Standard has been prepared by (Kingdom of Saudi Arabia) .

This standard has been approved as a Gulf Technical regulation by GSO Board of Directors in its meeting No. ( ) , held on / / h (/ /).

CODEX GENERAL STANDARD FOR CONTAMINANTS AND TOXINS IN FOODS

1. PREAMBLE

1.1 SCOPE

This Standard contains the main principles and procedures which are used and recommended by the Standardization Organization (GSO) in dealing with contaminants and toxins in foods and feeds, and lists the maximum levels of contaminants and natural toxicants in foods and feeds which are recommended by the (GSO) to be applied to commodities moving in international trade.

1.2 DEFINITION OF TERMS

1.2.1 General

The definitions for the purpose of the Standardization Organization (GSO), as mentioned in the Procedural Manual, are applicable to the General Standard for Contaminants and Toxins in Foods of (GSO) and only the most important ones are repeated here. Some new definitions are introduced, where this seems warranted to obtain optimal clarity. When reference is made to foods, this also applies to animal feed, in those cases where this is appropriate.

1.2.2 Contaminant

Standardization Organization (GSO) defines a contaminant as follows:

"Any substance not intentionally added to food, which is present in such food as a result of the production (including operations carried out in crop husbandry, animal husbandry and veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food or as a result of environmental contamination. The term does not include insect fragments, rodent hairs and other extraneous matter".

This standard applies to any substance that meets the terms of the Standardization Organization (GSO) definition for a contaminant, including contaminants in feed for food-producing animals, except:

1) Contaminants having only food quality significance, but no public health significance, in the food(s).
2) Pesticide residues, as defined by the Standardization Organization (GSO) definition that are within the terms of reference of the General Standard on Pesticide Residues. Pesticide residues arising from pesticide uses not associated with food production may be considered for inclusion in the General Standard for Contaminants and Toxins in Foods.
3) Residues of veterinary drugs, as defined by the (GSO) definition, that are within the terms of reference of the Standardization Organization (GSO).
4) Microbial toxins, such as botulinum toxin and staphylococcus enterotoxin, and microorganisms that are within the terms of reference of the Standardization Organization (GSO).
5) Residues of processing aids that are within the terms of reference of the Standardization Organization (GSO)[1].

1.2.3 Natural toxins included in this standard

The GSO definition of a contaminant implicitly includes naturally occurring toxicants such as are produced as toxic metabolites of certain microfungi that are not intentionally added to food (mycotoxins).

Microbial toxins that are produced by algae and that may be accumulated in edible aquatic organisms such as shellfish (phycotoxins) are also included in this standard. Mycotoxins and phycotoxins are both subclasses of contaminants.

---

[1]Processing aids are any substance or material, not including apparatus or utensils, and not consumed as a food ingredient by itself, intentionally used in the processing of raw materials, foods or its ingredients, to fulfil a certain technological purpose during treatment or processing and which may result in the non-intentional but unavoidable presence of residues or derivatives in the final product.

Endogenous natural toxicants that are implicit constituents of foods resulting from a genus, species or strain ordinarily producing hazardous levels of a toxic metabolite(s), i.e. phytotoxins are not generally considered within the scope of this standard. They are, however, within the terms of reference of the GSO and will be dealt with on a case by case basis.

1.2.4 Maximum level and related terms

The GSO ***maximum level (ML)*** for a contaminant in a food or feed commodity is the maximum concentration of that substance recommended by the GSO to be legally permitted in that commodity.

A GSO ***guideline level*** (***GL)*** is the maximum level of a substance in a food or feed commodity which is recommended by the GSO to be acceptable for commodities moving in international trade. When the GL is exceeded, governments should decide whether and under what circumstances the food should be distributed within their territory or jurisdiction[2].

1.3 GENERAL PRINCIPLES REGARDING CONTAMINANTS IN FOODS

1.3.1 General

Contamination of food and feed may pose a risk to human (and/or animal health). Moreover in some cases they may also have a negative impact on the quality of the food or feed. Food and feed can become contaminated by various causes and processes.

Contaminant levels in foods shall be as low as reasonably achievable. The following actions may serve to prevent or to reduce contamination of foods and feeds[3]:

- preventing food contamination at the source, e.g. by reducing environmental pollution.
-
- applying appropriate technology in food production, handling, storage, processing and packaging.
-
- applying measures aimed at decontamination of contaminated food or feed and measures to prevent contaminated food or feed to be marketed for consumption.

To ensure that adequate action is taken to reduce contamination of food and feed a Code of Practice shall be elaborated comprising source related measures and Good Manufacturing Practice as well as Good Agricultural Practice in relation to the specific contamination problem.

The degree of contamination of foods and feeds and the effect of actions to reduce contamination shall be assessed by monitoring, survey programs and more specialized research programs, where necessary.

When there are indications that health hazards may be involved with consumption of foods that are contaminated, it is necessary that a risk assessment is made. When health concerns can be substantiated, a risk management policy must be applied, based on a thorough evaluation of the situation. Depending on the assessment of the problems and the possible solutions, it may be necessary to establish maximum levels or other measures governing the contamination of foods. In special cases, it may also have to be considered to give dietary recommendations, when other measures are not sufficiently adequate to exclude the possibility of hazards to health.

National measures regarding food contamination should avoid the creation of unnecessary barriers to international trade in food or feed commodities. The purpose of the General Standard is to provide guidance about the possible approach of the contamination problem and to promote international harmonization through recommendations which may help to avoid the creation of trade barriers.

For all contaminants, which may be present in more than one food or feed item, a broad approach shall be applied, taking into account all relevant information that is available, for the assessment of risks and for the development of recommendations and measures, including the setting of maximum levels.

---

[2]For the contaminants methylmercury, radionuclides, acrylonitrile and vinylchloride monomer a GSO guideline level (GL) has been established. A GSO guideline level (GL) is the maximum level of a substance in a food or feed commodity which is recommended by the GSO to be acceptable for commodities moving in international trade. When the GL is exceeded, governments should decide whether and under what circumstances the food should be distributed within their territory or jurisdiction. Because the GSO has decided that the preferred format of a GSO standard in food or feed is a

maximum level, the present existing or proposed guideline levels shall be reviewed for their possible conversion to a maximum level after a risk assessment performed by General Standard, if appropriate.

[3] In addition, reference is made to the Code of Practice for source Directed measures to reduce contamination of food with chemicals and the Code of Practice on Good Animal Feeding .

1.3.2 Principles for establishing maximum levels in foods and feeds

The maximum levels shall only be set for food in which the contaminant may be found in amounts that are significant for the total exposure of the consumer, taking into consideration the Policy of the GSO Committee on Contaminants in Foods for Exposure Assessment of Contaminants and Toxins in Foods or Food Groups (Section III of the Procedural Manual).

The MLs shall be set in such a way that the consumer is adequately protected. At the same time the other legitimate factors need to be considered. This will be performed in accordance with the "Working principles for Risk Analysis for Food safety for Application by Governments".

The principles of Good Manufacturing Practice and Good Agricultural Practice as defined by GSO shall be used. Maximum levels shall be based on sound scientific principles leading to levels which are acceptable worldwide, so that there is no unjustified barrier to international trade. MLs shall be clearly defined with respect to status and intended use.

1.3.3 Specific criteria

The following criteria should (not preventing the use of other relevant criteria) be considered when developing recommendations and making decisions in connection with the GSO General Standard for Contaminants and Toxins in Food and Feed: (Further details about these criteria are given in Annex I).

Toxicological information

- identification of the toxic substance(s);
- metabolism by humans and animals, as appropriate;
- toxicokinetics and toxicodynamics including information on possible carry-over of the toxic substance from feed to edible animal tissue/products;
- information about acute and long term toxicity and other relevant toxicity;
- integrated toxicological expert advice regarding the acceptability and safety of intake levels of contaminants, including information on any population groups which are specially vulnerable.

Analytical data

- validated qualitative and quantitative data on representative samples;
- appropriate sampling procedures.

Intake data

- presence in foods of dietary significance for the contaminant intake;
- presence in foods that are widely consumed;
- food intake data for average and most exposed consumer groups;
- results from total diet studies;
- calculated contaminant intake data from food consumption models;
- data on intake by susceptible groups.

Fair trade considerations

- existing or potential problems in international trade;
- commodities concerned moving in international trade;

- information about national regulations, in particular on the data and considerations on which these regulations are based.

Technological considerations

- information about contamination processes, technological possibilities, production and manufacturing practices and economic aspects related to contaminant level management and control.

Risk assessment and risk management considerations

- risk assessment;
- risk management options and considerations;
- consideration of possible maximum levels in foods based on the criteria mentioned above;
- consideration of alternative solutions.

1.4 GSO PROCEDURE FOR ESTABLISHING STANDARDS FOR CONTAMINANTS AND TOXINS IN FOODS

1.4.1 General

The Procedure for the elaboration of GSO Standards, as contained in the Procedural Manual, is applicable. Further details are mentioned here regarding the procedure to be followed and the criteria for decision making, in order to clarify and to facilitate the process of the elaboration of GSO Standards for Contaminants and Toxins in Foods.

1.4.2 Procedure for preliminary discussion about contaminants and Toxins in Foods

Suggestions for new contaminants or new contaminant/commodity combinations to be discussed in GSO Standards for Contaminants and Toxins in Foods and to be included in the General Standard may be raised by delegates or by the secretariat. An initial discussion may be held based on oral contributions, but preferably on the basis of a note containing relevant and adequate information. For a satisfactory preliminary review the following information is essential:

1) Identification of the contaminant and concise information about the background of the problem.
2) Indications about the availability of toxicological information and analytical and intake data, including references.
3) Indications about (potential) health problems.
4) Indications about existing and expected barriers to international trade.
5) Information about technological possibilities and economic aspects related to the management of the contaminant problem in food.
6) Preferably a proposal for action by the GSO Standards for Contaminants and Toxins in Foods.

When a delegation wishes that the GSO Standards for Contaminants and Toxins in Foods shall consider a request for action concerning a specific contaminant this delegation shall, as far as possible, supply information as stated above to serve as the basis for a preliminary review and request the Secretariat to include the matter on the agenda of the next meeting of the Committee.

1.4.3 Procedure for risk management decisions in the Standards for Contaminants and Toxins in Foods regarding contaminants

An evaluation by GSO of the toxicological and of other aspects of a contaminant and subsequent recommendations regarding the acceptable intake and regarding maximum levels in foods shall be the main basis for decisions. In the absence of recommendations by GSO, decisions may be taken when sufficient information from other sources is available to the Committee and the matter is considered urgent.

The GSO procedure for risk management decisions is further described in Annex II.

1.5 FORMAT OF THE GSO GENERAL STANDARD FOR CONTAMINANTS AND TOXINS IN FOOD AND FEED

The General Standard contains two types of presentation for the Standards: Schedule I in which the standards are listed per contaminant in the various food categories, and Schedule II (to be developed at a later stage) in which the contaminant standards are presented per food (category).

The format of the presentation is according to the provisions described in the Procedural Manual, in so far they are applicable. In order to obtain maximal clarity, explanatory notes shall be added where appropriate. The format contains all elements necessary for full understanding of the meaning, background, application and scope of the standards and contains references to the relevant documents and discussion reports on which the standard is based.

A full description of the format is given in Annex III.

For each session of the GSO, a working document shall be prepared in which the complete list of GSO Standards for contaminants in foods (both proposed and agreed) is presented in the form of Schedule I.

The list of GSO contaminant standards for individual foods or food categories shall be presented according to an agreed food categorization system. See Annex IV.

1.6 REVIEW AND REVISION OF THE GENERAL STANDARD

The contaminant provisions for this Standard shall be reviewed on a regular basis and revised as necessary in the light of revisions of toxicological advice by General Standard or of changed risk management views, residue management possibilities, scientific knowledge or other important relevant developments.

Specific attention shall be given to the review of existing Maximum Levels and Guideline Levels and to their possible conversion to Maximum Levels.

ANNEX I

CRITERIA FOR THE ESTABLISHMENT OF MAXIMUM LEVELS IN FOODS

Introduction

In this Annex criteria are mentioned regarding information which is considered necessary for evaluating contaminant problems in foods and for the establishment of maximum levels. It is therefore important that these criteria are taken into account when information is supplied to General Standard.

The criteria mentioned here are elaborated in more detail than in section 1.3.3. of the Preamble. Only those aspects are mentioned that need further clarification, so criteria or aspects that are not mentioned here should not be ruled out in the evaluation process.

Toxicological information

Integrated toxicological expert advice regarding a safe/tolerable intake level of a contaminant is essential when decisions about maximum levels in foods are considered. A recommendation from General Standard regarding the maximum allowable or tolerable intake, based on a full evaluation of an adequate toxicological data base, shall be the main basis for decisions. In urgent cases, it may be possible to rely on less developed evaluations from General Standard or on toxicological expert advice from other international or national bodies.

When toxicological information is presented in relation to proposals for maximum levels for contaminants in foods, indications are desirable about the following aspects:

- identification of the toxic substance(s);
- metabolism in humans and animals, as appropriate;
- toxicokinetics and toxicodynamics;
- information about acute and long term toxicity in animals and humans, including epidemiological data on humans and other relevant toxicity data;
- conclusions and advice of toxicological expert(s) (groups), with references, including information on specially vulnerable population groups or animals.

Analytical data

Validated qualitative and quantitative analytical data on representative samples should be supplied. Information on the analytical and sampling methods used and on the validation of the results is desirable. A statement on the representatively of the samples for the contamination of the product in general (e.g. on a national basis) should be added. The portion of the commodity that was analyzed and to which the contaminant content is related should be clearly stated and preferably should be equivalent to the definition of the commodity for this purpose or to existing related residue regulation.

Appropriate sampling procedures should be applied. Special attention to this aspect is necessary in the case of contaminants that may be unequally distributed in the product (e.g. mycotoxins in some commodities).

Intake data

It is desirable to have information about the contaminant concentrations in those foods or food groups that (together) are responsible for at least half and preferably 80% or more of the total dietary intake of the contaminant, both for average consumers and for high consumers.

Information about the presence of the contaminant in foods that are widely consumed (staple foods) is desirable in order to be able to make a satisfactory assessment of the contaminant intake and of risks associated with food trade.

For the contaminants which can be present in food of animal origin as a consequence of the carryover from feed, information about the presence of the contaminant in the feed and feed components should be given. Furthermore the intake of contaminants by the different food producing animals and the resulting levels of the contaminant in the food of animal origin should be estimated.

Food consumption data for average, most exposed and susceptible consumer groups are desirable for evaluations of (potential) intake of contaminants. This problem, however, has to be addressed differently on a national and on an international scale. It is therefore important to have information about both average and high consumption patterns regarding a wide scale of foodstuffs, so that for every contaminant the most exposed consumer groups may be identified. Detailed information about high consumption patterns is desirable, both regarding group identification criteria (e.g. age or sex differences, vegetarian or regional dietary customs, etc.) and statistical aspects.

Dietary intake of contaminants: Reference is made to the Guidelines for the study of dietary intake of chemical contaminants (WHO, 1985 - *http://whqlibdoc.who.int/offset/WHO_OFFSET_87.pdf*). It is important to supply all relevant details, such as the type of study (duplicate diet, total diet or market basket study, selective study), and statistical details. Calculated contaminant intake data from food consumption models may also be useful. When results about food groups and about effects of preparation and cooking etc. are available, these should also be supplied.

Fair trade considerations

Existing, expected or potential problems in international trade: In order to assess the urgency of a problem to be discussed by General Standard it is important to have information about the magnitude of existing or expected problems, both regarding the amount and the source of the food or feed that is at stake and the concerned parties and economic aspects involved. Potential problems should also be indicated.

Foods concerned moving in international trade: The main exporting and importing countries for commodities which are involved in the issue should be identified and it is essential that information is available about contaminant concentrations in the commodities originating from the main exporting countries.

Information about national regulations: It is desirable that details are made available by countries (especially the main exporting and importing countries) about their national regulations regarding the contaminant in question, in particular on the data and the considerations on which these regulations are based. For a good evaluation of the problem it is essential that not only the data base is clear, but also the risk assessment and risk management policy which is used for making decisions regarding maximum levels in foods.

Technological considerations

Information about the source of the contaminant and the way in which the food is contaminated, possibly including information, if it is available, about contamination being present in parts only of the product, is essential for assessing the possibilities to control the contamination process and to be able to guarantee a desired product quality. Where possible ***Source-related measures*** should be proposed. ***Good Manufacturing Practice (GMP)*** and/or ***Good Agricultural Practice (GAP)*** should also be formulated to control a contamination problem. When this is possible, maximum levels may be based on GMP or GAP considerations and may thus be established at a level as low as reasonably achievable. Considerations regarding the technological possibilities to control a contamination problem, e.g. by cleaning, should also be taken into account when a primary risk assessment model (theoretical maximum daily intake) shows possible intakes exceeding the toxicological maximum intake recommendation. In such a case the possibilities of lower contamination levels need further careful examination. Then a detailed study about all the aspects involved is necessary, so that decisions about maximum limits can be based on a thorough evaluation of both the public health arguments and the possibilities and problems to comply with the proposed standard.

Risk assessment and risk management considerations

Risk assessment and risk management are conducted in compliance with the Working Principles for Risk Analysis for food safety by governments.

Risk assessment is defined as the scientific evaluation of the probability of occurrence of known or potential adverse health effects resulting from human exposure to foodborne hazards. The process consists of the following steps: ***hazard identification, hazard characterization, exposure assessment and risk characterization.*** (The definition includes quantitative risk assessment, which emphasizes reliance on numerical expressions of risk, and also qualitative expressions of risk, as well as an indication of the attendant uncertainties).

The first steps are ***hazard identification*** and ***hazard characterization.*** ***Hazard identification*** is the identification of known or potential health effects in humans, produced by a contaminant which may be present in a particular food or group of foods. ***Hazard characterization*** is the qualitative and, if possible, quantitative evaluation of the nature of the adverse effects associated with the food contaminant, including a dose/response assessment and, when possible, the establishment of a safety standard (ADI, TDI or comparable toxicological recommendation) for the intake of the contaminant. The ***exposure assessment*** is the qualitative and, when possible, quantitative evaluation of the likely intake of the contaminant via food, as well as exposure from other sources if relevant. In the ***risk characterization*** step, the hazard identification, hazard characterization and exposure assessment are combined into an estimation of the severity and occurrence of known or potential health effects likely to occur in a given population, including attendant uncertainties.

Potential public health risks can be considered to exist when there is evidence that the contaminant intake of (groups of) consumers may exceed (on a long term basis for long term recommendations) the toxicological recommendation about the maximum acceptable or tolerable intake level. More specific estimation and description of the risks will be necessary to deal adequately with cases when intakes exceeding the toxicological standard occur in practice and cannot easily be reduced. This also applies when it has not been possible to establish a safe dose level of the contaminant.

Risk management is defined as the process of weighing policy alternatives in the light of the risk assessment and, if required, to select and implement appropriate control options, including the establishment and enforcement of maximum levels of contaminants in foods. It is based on adequate risk assessment and on information about policy options and strategies to deal with contamination problems and involves ***risk communication.***

Risk communication is the interactive exchange of information and opinions concerning risk among risk assessors, risk managers and other interested parties. Responsible risk management is based on consistent application of an appropriate policy regarding the protection of public health, but also involves taking into account other relevant criteria, such as the available analytical data, the technological possibilities to control the contamination of products, economic factors and fair trade criteria.

In short, the risk assessment shall establish how many consumers possibly exceed the toxicological standard, and for how long time and how much, and what this implies as real health risks. Risk management involves, in a consistent way, deciding what is acceptable in this respect and what is not, to what extent other factors can be taken into account, and decisions and actions to achieve sufficient public health protection and control of the contamination.

Risk management decisions may lead to maximum levels for foods. In the process leading to such a decision, the consequences, costs and benefits should be presented and evaluated in relation to other policy options.

Establishment of maximum levels for contaminants

The establishment of maximum levels of contaminants in foods involves several principles, some of which have already been mentioned. Briefly stated, the following criteria will help in maintaining a consistent policy in this matter:

- MLs shall be set only for those contaminants that present both a significant risk to public health and a known or expected problem in international trade.
- MLs shall be set only for those foods that are significant for the total exposure of the consumer to the contaminant. When identifying the significance of certain foods in the total exposure to the contaminant, the criteria contained in the GSO Policy for Exposure Assessment of Contaminants and Toxins in Foods or Food Groups should be consulted.

- MLs shall be set as low as reasonably achievable. Providing it is acceptable from the toxicological point of view, MLs shall be set at a level which is (slightly) higher than the normal range of variation in levels in foods that are produced with current adequate technological methods, in order to avoid undue disruptions of food production and trade. Where possible, MLs shall be based on GMP and/or GAP considerations in which the health concerns have been incorporated as a guiding principle to achieve contaminant levels as low as reasonably achievable. Foods that are evidently contaminated by local situations or processing conditions that can be avoided by reasonably achievable means shall be excluded in this evaluation, unless a higher ML can be shown to be acceptable from a public health point of view and appreciable economic aspects are at stake.
- Proposals for MLs in products shall be based on data from at least various countries and sources, encompassing the main production areas/processes of those products, as far as they are engaged in international trade. When there is evidence that contamination patterns are sufficiently understood and will be comparable on a global scale, more limited data may be enough.
- MLs may be set for product groups when sufficient information is available about the contamination pattern for the whole group, or when there are other arguments that extrapolation is appropriate.
- Numerical values for MLs shall preferably be regular figures in a geometric scale (0.01, 0.02,
  0.05, 0.1, 0.2, 0.5, 1, 2, 5 etc.), unless this may pose problems in the acceptability of the MLs.
- MLs shall apply to representative samples per lot. If necessary, appropriate methods of sampling shall be specified.
- MLs should not be lower than a level which can be analyzed with methods of analysis that can be readily applied in normal product control laboratories, unless public health considerations necessitate a lower detection limit which can only be controlled by means of a more elaborate method of analysis. In all cases, however, a validated method of analysis should be available with which a ML can be controlled.
- The contaminant as it should be analyzed and to which the ML applies should be clearly defined. The definition may include important metabolites when this is appropriate from an analytical or toxicological point of view. It may also be aimed at indicator substances which are chosen from a group of related contaminants.
- The product as it should be analyzed and to which the ML applies, should be clearly defined. In general, MLs are set on primary products. MLs shall in general preferably be expressed as a level of the contaminant related to the product as it is, on a fresh weight basis. In some cases, however, there may be valid arguments to prefer expression on a dry weight basis. Preferably the product shall be defined as it moves in trade, with provisions where necessary for the removal of inedible parts that might disturb the preparation of the sample and the analysis. The product definitions used by the GSO and contained in the Classification of foods and feeds may serve as guidance on this subject; other product definitions should only be used for specified reasons. For contaminant purposes, however, analysis and consequently MLs will preferably be on the basis of the edible part of the product.

- For fat soluble contaminants which may accumulate in animal products, provisions should be applied regarding the application of the ML to products with various fat content (comparable to the provisions for fat soluble pesticides).

- Guidance is desirable regarding the possible application of MLs established for primary products to processed products and multi-ingredient products. When products are concentrated, dried or diluted, use of the concentration or dilution factor is generally appropriate in order to be able to obtain a primary judgment of the contaminant levels in these processed products. The maximum contaminant concentration in a multi-ingredient food can likewise be calculated from the composition of the food. Information regarding the behaviour of the contaminant during processing (e.g. washing, peeling, extraction, cooking, drying etc.) is however desirable to give more adequate guidance here. When contaminant levels are consistently different in processed products related to the primary products from which they are derived, and sufficient information is available about the contamination pattern, it may be appropriate to establish separate maximum levels for these processed products. This also applies when contamination may occur during processing. In general however, maximum levels should preferably be set for primary agricultural products and may be applied to processed, derived and multi-ingredient foods by using appropriate factors. When these factors are sufficiently known, they should be added to the data base about the contaminant and mentioned in connection to the maximum level in a product.
- MLs shall preferably not be set higher than is acceptable in a primary (theoretical maximum intake and risk estimation) approach of their acceptability from a public health point of view. When this poses problems in relation to other criteria for establishing MLs, further evaluations are necessary regarding the possibilities to reduce the contaminant levels, e.g. by improving GAP and/or GMP conditions. When this does not bring a satisfactory solution, further refined risk assessment and contaminant risk management evaluations will have to be made in order to try to reach agreement about an acceptable ML.

Procedure for risk assessment in relation to (proposed) MLs for contaminants

It is more difficult to control food contamination problems than in the case of food additives and pesticide residues. Proposed MLs will inevitably be influenced by this situation. In order to promote acceptance of GSO contaminant MLs, it is therefore important that assessments of the acceptability of those MLs are done in a consistent and realistic way. The procedure involves assessment of the dietary intake in relation to the proposed or existing MLs and the toxicological reference value.

In case a contaminant is transported from feed to food of animal origin, the intake of a contaminant by the different food producing animal species and the resulting levels in the food of animal origin must be evaluated.

The best estimate involves the national dietary pattern and corrections for residue losses during transport, storage, food preparation, for known residue level in foods as consumed, etc. It is recommended to be cautious in using other than average food consumption values, although it is considered appropriate to use relevant average food consumption data for identifiable subgroups of the population. The procedure is used to assess the acceptability of proposed MRLs and to promote international acceptance of GSO MRLs.

For pesticide residues, Guidelines (WHO, 1989, revised 1995) have been prepared for predicting the dietary intake, involving a two-tiered approach with increasingly realistic predictions of intake. In the crude estimate phase, hypothetical global and cultural diets are used to calculate the theoretical maximum daily intake (TMDI) (based on proposed or existing MRLs).

For contaminants and natural toxins in food, essentially the same procedure is used. Food consumption patterns with a higher intake of critical foods may be used in the intake calculations when this is part of an accepted national or international health protection and risk management policy. A harmonized approach using an appropriate intake estimation model that is as realistic as possible is recommended. Calculated data should where possible always be compared with measured intake data. Proposals for GSO MLs should be accompanied by intake calculations and risk assessment conclusions regarding their acceptability and use. The intake calculations should follow the methodology described in the GSO General Standard Policy for Exposure Assessment and, if appropriate, be accompanied by the generation of distribution curves for the concentration in specific foods/food groups. Statements from Governments about the non-acceptance of (proposed) GSO MLs should refer to specified intake calculations and risk management conclusions which support this position.

ANNEX II

PROCEDURE FOR RISK MANAGEMENT DECISIONS

Introduction

The recommended procedure for risk management decisions in the General Standard is presented here as a simple decision scheme based on the main criteria. Criterion (1), basic information about the contaminant (problem) is not further mentioned, because it is considered a prerequisite, without which no sensible discussion can take place, hazard identification and characterization. Criterion (5), technological and economic aspects, is an essential tool for making recommendations about the risk management of the contaminant problem and for developing MLs, and when this information is not adequate, further data shall be requested. Bearing this in mind, it need not be further mentioned in the decision scheme, which is shown below. Decisions can be based on the availability of information (- or + or ?) on the following criteria:

(2a) Tox toxicological information; (3)
PHP potential health problems;,

(2b) A/In analytical and intake data;,

(4) TP international trade problems.

The question mark ? is used in the column PHP, to indicate that only toxicological information is sufficiently available, or only intake data, so that there is no sufficient basis to decide whether there are potential health problems. Obviously, in practice there will be many situations which are not so clear cut as it is presented in the scheme. Information may be considered sufficient by some, and inadequate by others. Decisions will have to be taken on a case by case basis, considering the criteria mentioned in Annex I. Further quantification of the criteria for the necessary data base for making decisions may become inevitable when serious problems are encountered in practice regarding this aspect.

Risk management decision scheme for GSO

Case	Criterion				GSO Action
	(2a) Tox	(2b) A/In	(3) PHP	(4) TP	
1.	-	+	?	-	Request Tox data/evaluation
2.	-	+	?	+	Request Tox data/evaluation, national risk assessment. In urgent cases
3.	+	-	?	-	Request analytical/intake data
4.	+	+	-	-	No further action
5.	+	+	-	+	Request national risk assessment. After evaluation (in urgent cases, after a preliminary assessment
6.	+	+	+	-	Development of MLs
7.	+	+	+	+	Development of MLs, with priority (in urgent cases, if necessary, temporary MLs)

(-) insufficient information
(+) sufficient information
(?) only toxicological information is sufficiently available, or only intake data, so that there is no sufficient basis to decide whether there are potential health problems.

Introduction
The format for Schedule shall contain the following elements:
- Name of the contaminant: symbols, synonyms, abbreviations, scientific descriptions shall be mentioned.
- PMTDI, PTWI or similar toxicological reference value: when the situation is complex a short statement and further references may be necessary here.
- Contaminant definition: definition of the contaminant as it shall be analyzed and to which the maximum level applies.
- Reference to a source-directed measure or a code of practice for the contaminant, if appropriate.
- List of GSO maximum levels for that contaminant; this list shall be composed of the following elements, in columns:
- Classification number of feed/food commodity or feed/food category;
- Name of feed/food commodity/category;
- Numerical value of maximum level;
- Suffix accompanying a ML to specify the application of the ML;
- References to documents, or adoption year;
- References to standard criteria for methods of analysis and sampling;
- Notes/remarks.

ANNEX IV

FOOD CATEGORIZATION SYSTEM

Introduction

The food categorization system of the GSO is constructed to perform the following functions:

It has a logical structure which enables a clear and systematic presentation of the (proposed) MLs. It contains (references to) product definitions and definitions of the part of the product which is analyzed and to which the ML refers. It contains codes for the food categories and the individual foods, so that data can be stored and retrieved in a convenient way.

To achieve as much harmonization as possible, an existing agreed categorization system is used.

The General Standard uses the system which is developed in the framework of the GSO as it is also suitable for contaminants. It is adopted for characterizing the various food and feed groups and the individual commodities. This system is especially elaborated regarding primary agricultural commodities, but needs further extension regarding processed products. Where necessary, new (sub) group codes or commodity codes are therefore introduced. These are described in Annex IV-A. Annex IV-A will also contain product descriptions as far as they are different from those contained in the existing system described by the GSO.

Where appropriate and possible, the descriptive texts accompanying the food categories do or should also contain indications about the concentration or dilution factor in the processed commodities mentioned, in relation to the primary product(s) involved. In that way a first estimate can be made of the possible carry-over of contaminants from primary products to the various processed products. It has to be borne in mind however that the specific distribution of a contaminant in the primary product and the behaviour during processing is a complicating factor here. Further advice may be necessary in those cases. See also the general indications in Annex I and possible specific information mentioned in relation to the contaminant.

Description of the food categorization system of the GSO

The first part contains the categorization system as developed and maintained by the GSO. It consists of 5 classes, covering primary food commodities of plant, resp. animal origin, primary feed commodities and processed commodities of plant, resp. animal origin. The classes are subdivided in 19 types and 93 groups, which are identified by code numbers and letters.

Annex IV-A is the other part of the food categorization system for the General Standard. It is developed and maintained by the GSO, and is complementary to the system described in the first part. It is mainly directed to processed, derived and multi-ingredient foods and encompasses all those types and groups and commodity descriptions that are necessary to assign food categorization codes to existing or planned GSO MLs for contaminants.

ANNEX IV-A

COMPLEMENTARY FOOD CATEGORIZATION SYSTEM FOR THE GSO

Introduction

The additions to the food categorization system described in this Annex will serve the need of assigning a food code number to commodities that are not covered by this Annex. The commodities involved are mainly processed, derived and multi-ingredient foods.

The system has been designed as a comprehensive list (on a general level), in order to be able to accommodate possible future needs.

In this phase no individual product definitions and codes are given. It seems sufficient to go no further than a type or group level in judging the acceptability of the system. The classification can be developed in further detail as the need arises.

The system used in the GSO General Standard for Food Additives (GSFA) for food classification has been utilized as far as it is compatible with the existing Codex classification system described in this Annex.

See the following list of proposed new food categories. Some explanations (as shown in the list) and some existing related food categories, for a better insight in the proposed system.

Commodity descriptions can often be derived from existing GSO Standards.

Information regarding concentration and dilution factors, in relation to contaminant carry-over from primary products, will be added where appropriate and available.

Definitions for the part of the product that shall be analyzed and to which the ML of a contaminant will apply, that are different from existing definitions in this Annex, will also be added.

Class	Type	Group	Letter code	Product group description
D				**PROCESSED FOODS OF PLANT ORIGIN**
				(existing)
D	**01**			**Secondary commodities of plant origin**
				(5 existing groups)
D	01	06	TF	Treated fruit products (peeled, cut, frozen etc.)
				(New proposed group; commodity codes can be derived from existing fruit codes)
D	01	07	TV	Treated vegetable products (cleaned, cut, frozen etc.)
				(New proposed group; commodity codes can be derived from existing vegetable codes)
D	**02**			**Derived products of plant origin**
				(7 existing groups)
D	02	08	JV	Vegetable juices and purees
				(New proposed group; commodity codes can be derived from the existing vegetable codes)
D	02	09	SH	Sugars, syrups and honey
				(New proposed group; commodity codes to be developed)
D	**03**			**Manufactured foods of plant origin (multi-ingredient)**
				(1 existing group)
D	03	01	CP	Manufactured multi-ingredient cereal products (e.g. bread and other cooked cereal products)
				(existing group)

Class	Type	Group	Letter code	Product group description
D	03	02	CB	Beverages derived from cereals (e.g. beer)
				(New proposed group; commodity codes to be developed when the necessity arises)
D	03	03	NF	Fruit nectars
				(New proposed group; commodity codes can be derived from the existing fruit codes)
D	03	04	FF	Fermented fruit beverages (cider)
				(New proposed group; commodity codes can be derived from the existing fruit concerned)
				(New proposed group; commodity codes to be developed when the need arises)
D	03	06	FJ	Fruit jams, jellies, marmalades etc.
				(New proposed group; commodity codes to be derived from the existing fruit codes)
D	03	07	SF	Fruit chutneys and comparable preparations
				(New proposed group; commodity codes to be derived from the existing fruit codes)
D	03	08	SV	Vegetable chutneys and comparable preparations
				(New proposed group; commodity codes to be derived from the existing vegetable codes)
D	03	09	PS	Preparations from nuts, oil seeds and other seeds
				(New proposed group; commodity codes to be derived from the existing product codes)
D	03	l0	PP	Other manufactured plant products
				(New proposed group; commodity codes to be developed when the need arises)
E				**PROCESSED FOODS OF ANIMAL ORIGIN**
				(existing class)
E	**01**			**Secondary commodities of animal origin**
				(2 existing groups)
E	01	03	MS	Secondary meat products (e.g. cooked meat)
				(New proposed group; commodity codes to be derived from the existing meat codes)
E	01	04	ES	Secondary egg products (e.g. egg powder)
				(New proposed group; commodity codes to be derived from the existing egg codes)
E	01	05	WS	Secondary fishery products (e.g., smoked fish)
				(New proposed group; commodity codes to be derived from the existing fish codes)
E	**02**			**Derived animal products of animal origin**
				(4 existing groups)
E	02	05	MC	Derived meat products (e.g. meat extract)
				(New proposed group; commodity codes to be derived from existing meat codes)
E	02	06	ED	Derived egg products (e.g. egg white, yolk)
				(New proposed group; commodity codes to be derived from existing egg codes)

Class	Type	Group	Letter code	Product group description
E	02	07	WD	Derived fishery products
				(New proposed group; commodity codes to be derived from the existing fish codes)
E	**03**			**Manufactured food (single ingredient), animal origin**
				(1 existing group)
E	03	01	LI	Manufactured milk products (single ingredient)
				(existing group)
E	03	02	MT	Manufactured meat products (e.g. cured meat)
				(New proposed group; commodity codes to be derived from existing meat codes)
E	03	03	EM	Manufactured egg products (e.g. egg white powder)
				(New proposed group; commodity codes to be derived from existing egg codes)
E	03	04	WP	Manufactured fishery products
				(New proposed group; commodity codes to be derived from existing fish codes
E	**04**			**Manufactured food (multi-ingredient) of animal origin**
				(1 existing group)
E	04	01	LM	Manufactured milk products (multi-ingredient)
				(existing group)
E	04	02	MP	Manufactured meat products (multi-ingredient) (e.g. sausage)
				(New proposed group; commodity codes to be developed in relation to commodity description)
E	04	03	EP	Manufactured egg products (multi-ingredient)
				(New proposed groups; commodity codes to be developed in relation to commodity description)
E	04	04	WI	Manufactured fishery products (multi-ingredient)
				(New proposed group; commodity codes to be derived from existing fish codes)
F				**MULTI-INGREDIENT MANUFACTURED FOODS**
				(New proposed class)
F	**01**			**Beverages (multi-ingredient)**
				(New proposed type)
F	01	01	BS	Beverages (soft drinks end comparable preparations)
				(New proposed group; commodity codes to be developed when the necessity arises)
F	**02**			**Sauces, salad dressings, soups, bouillons etc.**
				(New proposed type)
F	02	01	SP	Seasonings and condiments
				(New proposed group; commodity codes to be developed when the necessity arises)
F	02	02	PV	Vinegars (multi-ingredient)
				(New proposed group; commodity codes to be developed when the necessity arises)

Class	Type	Group	Letter code	Product group description
F	02	03	PM	Mustards
				(New proposed group; commodity codes to be developed when the necessity arises)
F	02	04	BS	Soups and broths
				(New proposed group; commodity codes to be developed when the necessity arises)
F	02	05	ME	Sauces and comparable products
				(New proposed group; commodity codes to be developed when the necessity arises)
F	02	06	BC	Salads and sandwich spreads
				(New proposed group; commodity codes to be developed when the necessity arises)
F	**03**			**Chocolate & other confectionery**
				(New proposed type)
F	03	01	CC	Chocolate products
				(New proposed group; commodity codes to be developed when the necessity arises)
F	03	02	CS	Sugar confectionery, including nut based and comparable multi-ingredient confectionery
				(New proposed group; commodity codes to be developed when the necessity arises)
F	03	03	CG	Chewing gum
				(New proposed group; commodity codes to be developed when the necessity arises)
F	**04**			**Margarines & other multi-ingredient fatty foods**
				(New proposed type)
F	04	01	HF	Margarines > 80 % fat
				(New proposed group; commodity codes to be developed when the necessity arises)
F	04	02	LF	Margarines < 80 % fat
				(New proposed group; commodity codes to be developed when the necessity arises)
F	04	03	OF	Other products based on fat emulsions
				(New proposed group; commodity codes to be developed when the necessity arises)
F	**05**			**Multi-ingredient bakery wares**
				(New proposed type)
F	05	01	BF	Fine bakery wares
				(New proposed group; commodity codes to be developed when the necessity arises)
F	05	02	BS	Savory snacks (potato, cereal or starch base)
				(New proposed group; commodity codes to be developed when the necessity arises)
F	05	03	NS	Savory coated nuts, other nut snacks, nut mixtures
				(New proposed group; commodity codes to be developed when the necessity arises)
F	**06**			**Multi-ingredient foods for special dietary uses**
				(New proposed type)

Class	Type	Group	Letter code	Product group description
F	06	01	ID	Infant and follow-on formulae
				(New proposed group; commodity codes to be developed when the necessity arises)
F	06	02	CD	Weaning foods
				(New proposed group; commodity codes to be developed when the necessity arises)
F	06	03	HD	Dietetic foods intended for special medical purposes
				(New proposed group; commodity codes to be developed when the necessity arises)
F	06	04	TD	Dietetic formulae for slimming purposes and weight reduction
				(New proposed group; commodity codes to be developed when the necessity arises)
F	06	05	SD	Supplementary foods for dietetic uses
				(New proposed group; commodity codes to be developed when the necessity arises)
F	06	06	AD	Food supplements
				(New proposed group; commodity codes to be developed when the necessity arises)
G				**OTHER EDIBLE PRODUCTS**
				(New proposed class)
G	**01**			**Water, minerals and organic compounds**
				(New proposed type)
G	01	01	DW	Drinking water, mineral water, table waters
				(New proposed group, commodity codes to be developed when the necessity arises)
G	01	02	SW	Salt, salt substitutes, mineral preparations
				(New proposed group; commodity codes to be developed when the necessity arises)

SCHEDULE I - MAXIMUM AND GUIDELINE LEVELS FOR CONTAMINANTS AND TOXINS IN FOODS

INDEX OF CONTAMINANTS

EXPLANATORY NOTES

Reference to GSO:	References to GSO A meeting in which the contaminant was evaluated and the year of that meeting
Toxicological guidance value:	Toxicological advice about the tolerable intake level of the contaminant for humans, expressed in milligrams (mg) per kg body weight (bw). The year of recommendations and additional explanation are included.
Residue definition:	Definition of the contaminant in the form of which the ML applies or which may or should be analyzed in commodities.
Synonyms:	Symbols, synonyms abbreviations, scientific descriptions and identification codes used to define the contaminant.
Commodity code:	The code for food commodities is according to the food and feed categorization system as contained in GSO General Standard Classification of foods and feeds. The food/feed categorization system also specifies the part of Commodity which should be analysed and to which the ML applies, unless a specific commodity definition is provided as an annex to the ML. For those maximum levels contained in Codex commodity standards, the relevant standard numbers are referred, if the code numbers are not readily available for these commodities.
Suffix:	A note accompanying an ML or GL, used to specify the application or the future revision of the ML, e.g., specific residue definitions can be mentioned by abbreviations here. See also "Qualification of MLs" below.
Type:	Indicates whether the value is GSO maximum level (ML) or GSO guideline level (GL). See also the definitions of these terms in the preamble of the GSO Standard>

Qualification of MLs

C:	In canned products only

Definitions of some toxicological terms

PMTDI:	*(Provisional Maximum Tolerable Daily Intake)* The endpoint used for contaminants with no cumulative properties. Its value represents permissible human exposure as a result of the natural occurrence of the substance in food and in drinking-water. In the case of trace elements that are both essential nutrients and unavoidable constituents of food, a range is expressed, the lower value representing the level of essentiality and the upper value the PMTDI.
PTWI:	*(Provisional Tolerable Weekly Intake)* An endpoint used for food contaminants such as heavy metals with cumulative properties. Its value represents permissible human weekly exposure to those contaminants unavoidably associated with the consumption of otherwise wholesome and nutritious foods.
PTMI:	*(Provisional Tolerable Monthly Intake)* An endpoint used for a food contaminant with cumulative properties that has a very long half-life in the human body. Its value represents permissible human monthly exposure to a contaminant unavoidably associated with otherwise wholesome and nutritious foods

Schedule I - Mycotoxin

AFLATOXINS, TOTAL

Toxicological guidance:	Carcinogenic potency estimates for aflatoxins B, G, M (1997), Intake should be reduced to levels as low as reasonably possible)
Residue definition:	Aflatoxins total (B1 +B2 + G1 + G2)
Synonyms:	Abbreviations, AFB, AFG, with numbers, to designate specific compounds

Schedule 2 - Mycotoxin

Commodity / Product		Level			Suffix	Type	Notes/Remarks For GSO
Code	Name	B1	∑(B1 +B2 + G1 + G2)	M1			
		µg/kg					
	Peanut	8*	15	-		ML	The ML applies to peanuts intended for further processing. For sampling plan, see Annex 1 below.
	Almonds	12*	15			ML	The ML applies to almonds intended for further processing For sampling plan, see Annex 2 below
	Brazil nuts	8*	10*	-		ML	The ML applies to shelled ready-to-eat Brazil nuts For sampling plan, see Annex 2 below
	Brazil nuts	8*	15	-		ML	The ML applies to shelled Brazil nuts destined for further processing
	Hazelnuts	8*	15	-		ML	The ML applies to hazelnuts intended for further processing For sampling plan, see Annex 2 below
	Pistachios	12*	15	-		ML	The ML applies to pistachios intended for further processing For sampling plan, see Annex 2 below
	Almonds	8*	10	-		ML	The ML applies to almonds “ready-to-eat”. For sampling plan, see Annex 2
	Hazelnuts	5*	10	-		ML	The ML applies tohazelnuts “ready-to-eat”. For sampling plan, see Annex 2.
	Pistachios	8*	10	-		ML	The ML applies to pistachios “ready-to-eat”. For sampling plan, see Annex 2.
	Maize and rice	5*	10*	-			Maize and rice to be subjected to sorting or other physical treatment before human consumption or use as an ingredient in foodstuffs

Aflatoxins are a group of highly toxic mycotoxins produced by fungi of the genus Aspergillus. The four main aflatoxins found in contaminated plant products are B1, B2, G1 and G2 and are a group of structurally related difuranocoumarin derivatives that usually occur together in varying ratios, AFB1 usually being the most important one. These compounds pose a substantial hazard to human and animal health. IARC (1992) classified aflatoxin B1 in Group 1 (human carcinogen) and AFM in Group 2B (probable human carcinogen). The liver is the primary target organ.

AFLATOXIN M1

Toxicological guidance: Cancer potency estimates at specified residue levels (2001, Using worst-case assumptions, the additional risks for liver cancer predicted with use of proposed maximum levels of aflatoxin M1 of 0.05 and 0.5 µg/kg are very small. The potency of aflatoxin M1 appears to be so low in HBsAg- individuals that a carcinogenic effect of M1 intake in those who consume large quantities of milk and milk products in comparison with non-consumers of these products would be impossible to demonstrate. Hepatitis B virus carriers might benefit from a reduction in the aflatoxin concentration in their diet, and the reduction might also offer some protection in hepatitis C virus carriers.)

Residue definition: Aflatoxin M1

Synonyms: AFM1

Commodity / Product		**Level**	**Suffix**	**Type**	**Notes/Remarks**
Code	**Name**	**µg/kg**			
	Raw milk	0,050			Raw milk heat-treated milk and milk for the manufacture of milk-based products

OCHRATOXIN A

Toxicological guidance: **PTWI 0.0001 mg/kg bw (2001)**

Residue definition: Ochratoxin A

Synonyms: (The term "ochratoxins" includes a number of related mycotoxins (A, B, C and their esters and metabolites), the most important one being ochratoxin A)

PATULIN

Toxicological guidance: PMTDI 0.0004 mg/kg bw (1995)
Residue definition: patulin

Commodity / Product		Level	Suffix	Type	Notes/Remarks
Code	**Name**	**µg/kg**			
	Apple juice	10		ML	Apple juice and solid apple products, including apple compote and apple puree, for infants and young children (1) and labelled and sold as such (2)

Patulin is a low molecular weight hemiacetal lactone mycotoxin produced by species of the genera Aspergillus,

Deoxynivalenol

Toxicological guidance: For the purpose of the application of maximum levels for deoxynivalenol, rice is not included in 'cereals' and rice products are not included in 'cereal products.

Commodity / Product		Level	Suffix	Type	Notes/Remarks
Code	**Name**	**µg/kg**			
	Bread pastries biscuits cereal snacks and breakfast cereals	500			
	Processed cereal	200			Processed cereal-based foods and baby foods for infants and young children (1), (2).

Deoxynivalenol (DON), also known as, Vomitoxin is a type B trichothecene, an epoxy-sesquiterpenoid. This mycotoxin occurs predominantly in grains such as wheat, barley, oats, rye, and maize, and less often in rice, sorghum, and triticale.

Zearalenone

Toxicological guidance: For the purpose of the application of maximum levels for **Zearalenone**, rice is not included in 'cereals' and rice products are not included in 'cereal products.

Commodity / Product		Level	Suffix	Type	Notes/Remarks
Code	**Name**	**µg/kg**			
	Unprocessed cereals other than maize	100			
	Unprocessed maize	350			Unprocessed maize (1) with the exception of unprocessed maize intended to be processed by wet milling (2)
	Bread pastries biscuits cereal snacks and breakfast cereals	50			
	Processed cereal	20			Processed cereal-based foods and baby foods for infants and young children (1), (2)

Zearalenone (ZEA), also known as RAL and F-2 mycotoxin, is a potent estrogenic metabolite produced by some *Gibberella* species. (1) The maximum level applies to unprocessed cereals placed on the market for first-stage processing. 'First-stage processing' shall mean any physical or thermal treatment, other than drying, of or on the grain. Cleaning, sorting and drying procedures are not considered to be 'first-stage processing' insofar no physical action is exerted on the grain kernel itself and the whole grain remains intact after cleaning and sorting. In integrated production and processing systems, the maximum level applies to the unprocessed cereals in case they are intended for first-stage processing. (2) The exemption applies only for maize for which it is evident e.g. through labeling, destination, that it is intended for use in a wet milling process only (starch production).

ARSENIC

Toxicological guidance: PTWI 0.015 mg/kg bw (1988, For inorganic arsenic)
Residue definition: Arsenic: total (As-tot) when not otherwise mentioned; inorganic arsenic (As-in); or other specification
Synonyms: As

Commodity / Product Code	Name	Level mg/kg CAC	Suffix	Type	Notes/Remarks
	Edible fats and oils	0.1		ML	Edible fats and oils not covered by individual standards
	Margarine	0.1		ML	
	Minarine	0.1		ML	
	Named animal fats	0.1		ML	premier jus and edible tallow.
	Olive oil, refined	0.1		ML	
	Olive oil, virgin	0.1		ML	
	Olive, residue oil	0.1		ML	Olive pomace oil
	Vegetable oils, Crude	0.1		ML	Named vegeable oils from arachis, babassu, coconut, cottonseed, grapeseed, maize, mustardseed, palm kernel, palm, rapeseed, safflowerseed, sesameseed, soya bean, and sunflowerseed, and palm olein, stearin and superolein.
	Vegetable oils, Edible	0.1		ML	Named vegeable oils from arachis, babassu, coconut, cottonseed, grapeseed, maize, mustardseed, palm kernel, palm, rapeseed, safflowerseed, sesameseed, soya bean, and sunflowerseed, and palm olein, stearin and superolein.
	Natural mineral waters	0.01		ML	Expressed in total As mg/l
Salt, food grade		0.5		ML	

Arsenic is a metalloid element which is normally occurring in mineral bound form in the earth's crust and which can become more easily available by natural sources such as volcanic activity and weathering of minerals, and by anthropogenic activity causing emissions in the environment, such as ore smelting, burning of coal and specific uses, such as arsenic-based wood preservatives, pesticides or veterinary or human medicinal drugs. As a result of naturally occurring metabolic processes in the biosphere arsenic occurs as a large number of organic or inorganic chemical forms in food (species). Especially in the marine environment arsenic is often found in high concentrations of organic forms, up to 50 mg/kg of arsenic on a wet weight basis in some seafood including seaweed, fish, shellfish and crustaceans. In fresh water and in the terrestrial environments arsenic is normally found in much lower levels (typically 0-20 ug/kg) in crop plants and in livestock. Higher levels may be found in rice, mushrooms and sometimes in poultry which is fed fish meal containing arsenic. The most toxic forms of arsenic are the inorganic arsenic (III) and (V) compounds; the inorganic arsenic trioxide is well known as a rat poison, which was also sometimes used for homicide. Methylated forms of arsenic have a low acute toxicity; arsenobetaine which is the principal arsenic form in fish and crustaceans is considered non- toxic. In shellfish, molluscs and seaweed dimethylarsinylriboside derivatives occur ("arsenosugars"), the possible toxicity of which is not known in detail. Only a few percent of the total arsenic in fish is present in inorganic form, which is the only form about which a PTWI has been developed by GSO. The human epidemiological data used for this risk assessment is based on exposure to inorganic arsenic in drinking water. IARC has classified inorganic arsenic as a human carcinogen, and the estimated lifetime risk for arsenic- induced skin cancer which may be caused by drinking water at or in excess of the WHO guideline for arsenic in drinking water is estimated at 6x 10-4.

CADMIUM

Toxicological guidance: PTWI 0.007 mg/kg bw (1988 (maintained in 2000 & 2003), The 64th JECFA concluded that the effect of different MLs on overall intake of cadmium would be very small. At the proposed Codex MLs, mean intake of cadmium would be reduced by approximately 1% of the PTWI. The imposition of MLs one level lower would result in potential reductions in intake of cadmium of no more than 6% (wheat grain, potatoes) of the PTWI. At the proposed Codex MLs, no more than 9% of a commodity would be violative (oysters). MLs one level below those proposed would result in approximately 25% of molluscs, potatoes, and other vegetables being violative.)

Residue definition: Cadmium, total

Synonyms: Cd

Commodity / Product Code	Name	Level mg/kg GSO	Suffix	Type	Notes/Remarks
	Brassica vegetables	0.05		ML	
	Bulb vegetables	0.05		ML	
	Fruiting vegetables, cucurbits	0.05		ML	
	Fruiting vegetables, other than cucurbits	0.05		ML	Excluding tomatoes and edible fungi.
	Leafy vegetables	0.2		ML	
	Legume vegetables	0.1		ML	
	Potato	0.1		ML	Peeled
	Pulses	0.1		ML	Excluding soya bean (dry)
	Root and tuber vegetables	0.1		ML	Excluding potato and celeriac
	Stalk and stem vegetables	0.1		ML	
	Cereal grains, except buckwheat, cañihua and quinoa	0.1		ML	Excluding wheat and rice; and bran and germ
	Rice, polished	0.4		ML	
	Wheat	0.2		ML	
	Marine bivalve molluscs	2		ML	Excluding oysters and scallops
	Cephalopods	2		ML	Without viscera
	Natural mineral waters	0.003		ML	Expressed in mg/l
	Salt, food grade	0.5		ML	
	Soybeans	0.2*			

Cadmium is a relatively rare element, released to the air, land, and water by human activities. In general, the two major sources of contamination are the production and utilization of cadmium and the disposal of wastes containing cadmium. Increases in soil cadmium content will result in an increase in the uptake of cadmium by plants; the pathway of human exposure from agricultural crops is thus susceptible to increases in soil cadmium. The cadmium uptake by plants from soil is greater at low soil pH. Edible free-living food organisms such as shellfish, crustaceans, and fungi are natural accumulators of cadmium. Similar to humans, there are increased levels of cadmium in the liver and kidney of horses and some feral terrestrial animals. Regular consumption of these items can result in increased exposure. Tobacco is an important source of cadmium uptake in smokers.

LEAD

Toxicological guidance: PTWI 0.025 mg/kg bw (1987 for infants and young children, extended to all age groups in 1993, maintained 1999)
Residue definition: Lead, total
Synonyms: Pb

Commodity/Product Code	Name	level mg/kg	Suffix	Type	Notes/Remarks
	GSO				
	Assorted (sub)tropical fruits, edible peel	0.1		ML	
	Assorted (sub)tropical fruits, inedible peel	0.1		ML	
	Berries and other small fruits	0.2		ML	
	Citrus fruits	0.1		ML	
	Pome fruits	0.1		ML	
	Stone fruits	0.1		ML	
	Brassica vegetables	0.3		ML	Excluding kale
	Bulb vegetables	0.1		ML	
	Fruiting vegetables, Cucurbits	0.1		ML	
	Fruiting vegetables, other than Cucurbits	0.1		ML	Excluding mushrooms
	Leafy vegetables	0.3		ML	Including Brassica leafy vegetables but excluding spinach.
	Legume vegetables	0.2		ML	
	Pulses	0.2		ML	
	Root and tuber vegetables	0.1		ML	Including peeled potatoes
	Canned fruit cocktail	1		ML	
	Canned grapefruit	1		ML	
	Canned mandarin oranges	1		ML	
	Canned mangoes	1		ML	
	Canned pineapple	1		ML	
	Canned raspberries	1		ML	
	Canned strawberries	1		ML	
	Canned tropical fruit salad	1		ML	
	Jams (fruit preserves) and jellies	1		ML	
	Mango chutney	1		ML	
	Table olives	1		ML	
	Canned asparagus	1		ML	
	Canned carrots	0. 1		ML	

Commodity/Product Code	Name	Level mg/kg GSO	Suffix	Type	Notes/Remarks
	Canned green beans and canned wax beans	1		ML	
	Canned green peas	1		ML	
	Canned mature processed peas	1		ML	
	Canned mushrooms	1		ML	
	Canned palmito	1		ML	
	Canned sweet corn	1		ML	
	Canned tomatoes	1		ML	
	Pickled cucumbers (cucumber pickles)	1		ML	
	Processed tomato concentrates	1.5		ML	
	Fruit juices	0.05		ML	Including nectars; Ready to drink
	Cereal grains, except buckwheat, cañihua and quinoa	0.2		ML	
	Canned chestnuts and canned chestnuts puree	1		ML	
	Meat of cattle and sheep	0.1		ML	Also applies to the fat from meat
	Poultry meat	0.1		ML	
	Cattle, Edible offal of	0.5		ML	
	Poultry, Edible offal of	0.5		ML	
	Edible fats and oils	0.1		ML	Edible fats and oils not covered by individual standards
	Fish	0.3		ML	
	Margarine	0.1		ML	
	Minarine	0.1		ML	
	Named animal fats	0.1		ML	premier jus and edible tallow.
	Olive oil, refined	0.1		ML	
	Olive oil, virgin	0.1		ML	
	Olive oil, residue oil				

Commodity/Product Code	Name	Level mg/kg GSO	Suffix	Type	Reference	Notes/Remarks
	Poultry fats	0.1	ML			
	Vegetable oils, Crude	0.1	ML		CS 210-1999	Oils of arachis, babasu, coconut, cottonseed, grapeseed, maize, mustardseed, palm kernel, palm, rapeseed, saflowerseed, sesameseed, soya bean, and sunflowerseed, and palm olein, stearin and superolein and other oils but excluding cocoa butter
	Vegetable oils, Edible	0.1	ML		CS 210-1999	Oils of arachis, babasu, coconut, cottonseed, grapeseed, maize, mustardseed, palm kernel, palm, rapeseed, saflowerseed, sesameseed, soya bean, and sunflowerseed, and palm olein, stearin and superolein and other oils but excluding cocoa butter
	Milks	0.02	ML			A concentration factor applies to partially or wholly dehydrated milks.
	Secondary milk products	0.02	ML			As consumed
	Natural mineral waters	0.01	ML		CS 108-1981	Expressed in mg/l
	Infant formula	0.02	ML			Ready to use
	Salt, food grade	2	ML		CS 150-1985	

MERCURY

Toxicological guidance: PTWI 0.005 mg/kg bw (1978)

Residue definition: Mercury, Total

Synonyms: Hg

Mercury is a naturally occurring metallic element which can be present in foodstuffs by natural causes; elevated levels can also occur due to e.g. environmental contamination by industrial or other uses of mercury. Methylmercury and also total mercury levels in terrestrial animals and plants are usually very low; the use of fish meal as animal feed can however also lead to higher methyl mercury levels in other animal products.

Commodity/Product		Level mg/kg	Suffix	Type	Reference	Notes/Remarks
Code	Name	GSO				
	Natural mineral waters	0.001		ML	CS 108-1981	Expressed in mg/l
	Salt, food grade	0.1				
	Food supplements (39)	1.0*		ML	CS 150-1985	
	Meat, Meat Products and Fish (rays,tune,swordfish and snake mackerel)	1.0*				

METHYLMERCURY

Toxicological guidance: PTWI 0.0016 mg/kg bw (2003)
Residue definition: Methylmercury
Related Code of Practice: Code of Practice for Source Directed Measures to Reduce Contamination of Foods with Chemicals.

Commodity/Product Code	Name	Level mg/kg GSO	Suffix	Type	Notes/Remarks
	Fish	0.5		GL	Except predatory fish The Guideline levels are intended for methylmercury in fresh or processed fish and fish products moving in international trade
	Predatory fish	1		GL	Predatory fish such as shark (WS 0131), swordfish, tuna (WS 0132), pike (WF 0865) and others The Guideline level for methylmercury in fresh or processed fish and fish products moving in international trade.

Lots should be considered as being in compliance with the guideline levels if the level of methylmercury in the analytical sample, derived from the composite bulk sample, does not exceed the above levels. Where these Guideline levels are exceeded, governments should decide whether and under what circumstances, the food should be distributed within their territory or jurisdiction and what recommendations, if any, should be given as regards restrictions on consumption, especially by vulnerable groups such as pregnant women. Methylmercury is the most toxic form of mercury and is formed in aquatic environments. Methylmercury therefore is found mainly in aquatic organisms. It can accumulate in the food chain; the levels in large predatory fish species are therefore higher than in other species and fish is the predominant source of human exposure to methylmercury. Methylmercury and also total mercury levels in terrestrial animals and plants are usually very low; the use of fish meal as animal feed can however also lead to higher methyl mercury levels in other animal products.

TIN

Reference to GSO: (2013)
Reference to: commission regulation: general Standard (2013)
Toxicological guidance:Residue definition:Tin, total (Sn-tot) when not otherwise mentioned; inorganic tin (Sn-in); or other specification Synonyms: Sn

Commodity/Product Code	Name	Level mg/kg GSO	Suffix	Type	Notes/Remarks
	Canned foods (other than beverages)	200*	C	ML	
	Canned beverages	150	C	ML	The scope of the Standard includes canned mandarin oranges, canned grapefruits, canned pummelos and canned sweet oranges offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing.
	Canned citrus fruits	100	C	ML	
	Jams, jellies and marmalades	250	C	ML	The scope of the Standard covers jams, jellies and marmalades made from all fruits and vegetables offered for direct consumption, including for catering purposes or for repacking if required excluding: (a) products when indicated as being intended for further processing such as those intended for use in the manufacture of fine bakery wares, pastries or biscuits; (b) products which are clearly intended or labelled as intended for special dietary uses; (c) reduced sugar products or those with a very low sugar content; (d) products where the foodstuffs with sweetening properties have been replaced wholly or partially by food additive sweeteners. (e)
	Canned baby foods and processed cereal-based foods for infants and young childrenexcluding dried and powder products (3)29)	*50			
	Canned infant formula and flow-on formula (including infant milk and flow-on-milk),excluding dried and powder products	*50			
	Canned dietary foods for special medical purposes especially for infants, excluding dried and powder products	50*			

Commodity/Product Code	Name	Level mg/kg GSO	Suffix	Type	Reference	Notes/Remarks
	Canned stone fruits	250		ML		The scope of the Standard includes canned peaches, canned plums, canned apricots and canned cherries offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing.
	Canned vegetables	250	C	ML		The scope of the Standard includes canned asparagus, canned carrots, canned green peas, canned green beans and wax beans, canned mature processed peas, canned palmito, canned sweet corn and canned baby corn offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing. This Standard does not cover vegetables that are lacto-fermented, pickled or preserved in vinegar.
	Canned fruit cocktail	250	C	ML	CS 78-1981	
	Canned mangoes	250	C	ML	CS 159-1987	
	Canned pineapple	250	C	ML	CS 42-1981	
	Canned raspberries	250	C	ML	CS 60-1981	
	Canned strawberries	200	C	ML	CS 62-1981	
	Canned tropical fruit salad	250	C	ML	CS 99-1981	
	Mango chutney	250	C	ML	CS 160-1987	
	Table olives	250	C	ML	CS 66-1981	
	Canned mushrooms	250	C	ML	CS 55-1981	
	Canned tomatoes	250	C	ML	CS 13-1981	
	Pickled cucumber	250	C	ML	CS 115-1981	
	Processed tomato concentrates	250	C	ML	CS 57-1981	
	Canned chestnuts and chestnut purée	250	C	ML	CS 145-1985	
	Cooked cured chopped meat	200	C	ML	CS 98-1981	For products in tinplate containers
	Cooked cured chopped meat	50	C	ML	CS 98-1981	For products in other containers

Commodity/Product Code	Name	Level mg/kg	Suffix	Type	Reference	Notes/Remarks
	Corned beef	50	C	ML	CS 88-1981	For products in other containers
	Corned beef	200	C	ML	CS 88-1981	For products in tinplate containers
	Luncheon meat	200	C	ML	CS 89-1981	For products in tinplate containers
	Luncheon meat	50	C	ML	CS 89-1981	For products in other containers

Tin is mainly used in tinplated containers, but it is also extensively used in solders, in alloys including dental amalgams. Inorganic tin compounds, in which the element may be present in the oxidation states of +2 or +4, are used in a variety of industrial processes for the strengthening of glass, as a base for colors, as catalysts, as stabilizers in perfumes and soaps, and as dental anticariogenic agents. On the whole, contamination of the environment by tin is only slight. Food is the main source of tin for man. Small amounts are found in fresh meat, cereals, and vegetables. Larger amounts of tin may be found in foods stored in plain cans and, occasionally, in foods stored in lacquered cans. Some foods such as asparagus, tomatoes, fruits, and their juices tend to contain high concentrations of tin if stored in unlaquered cans (Environmental health criteria for tin; International Programme on Chemical Safety (IPCS); 1980). Inorganic tin is found in food in the +2 and +4 oxidation states; it may occur in a cationic form (stannous and stannic compounds) or as inorganic anions (stannites or stannates).

RADIONUCLIDES

Commodity Code	Product Name	Representative radionuclides	Dose per unit intake factor in Sv/Bq	Level in Bq/kg	Type	Notes/Remarks for Codex Alimentarius

	Infant foods*	^{238}Pu, ^{239}Pu, ^{240}Pu, ^{241}Am		1	GL	
	Infant foods *	^{90}Sr, ^{106}Ru, ^{129}I, ^{131}I, ^{235}U		100	GL	
	Infant foods *	^{35}S**, ^{60}Co, ^{89}Sr, ^{103}Ru, ^{134}Cs, ^{137}Cs, ^{144}Ce, ^{192}Ir		**1,000**	**GL**	
	Infant foods *	^{3}H***, ^{14}C, ^{99}Tc		**1,000**	**GL**	
	Foods other than infant foods	^{238}Pu, ^{239}Pu, ^{240}Pu, ^{241}Am		10	GL	
	Foods other than infant foods	^{90}Sr, ^{106}Ru, ^{129}I, ^{131}I, ^{235}U		**100**	**GL**	
	Foods other than infant foods	^{35}S**, ^{60}Co, ^{89}Sr, ^{103}Ru, ^{134}Cs, ^{137}Cs, ^{144}Ce, ^{192}Ir		**1,000**	**GL**	
	Foods other than infant foods	^{3}H***, ^{14}C, ^{99}Tc		10,000	GL	

* When intended for use as such.
** This represents the value for organically bound sulphur.
*** This represents the value for organically bound tritium.

Scope: The Guideline Levels apply to radionuclides contained in foods destined for human consumption and traded internationally, which have been contaminated following a nuclear or radiological emergency[1]. These guideline levels apply to food after reconstitution or as prepared for consumption, i.e., not to dried or concentrated foods, and are based on an intervention exemption level of 1 mSv in a year.

Application: As far as generic radiological protection of food consumers is concerned, when radionuclide levels in food do not exceed the corresponding Guideline Levels, the food should be considered as safe for human consumption. When the Guideline Levels are exceeded, national governments shall decide whether and under what circumstances the food should be distributed within their territory or jurisdiction. National governments may wish to adopt different values for internal use within their own territories where the assumptions concerning food distribution that have been made to derive the Guideline Levels may not apply, e.g., in the case of wide-spread radioactive contamination. For foods that are consumed in small quantities, such as spices, that represent a small percentage of total diet and hence a small addition to the total dose, the Guideline Levels may be increased by a factor of 10.

Radionuclides: The Guideline Levels do not include all radionuclides. Radionuclides included are those important for uptake into the food chain; are usually contained in nuclear installations or used as a radiation source in large enough quantities to be significant potential contributors to levels in foods, and; could be accidentally released into the environment from typical installations or might be employed in malevolent actions. Radionuclides of natural origin are generally excluded from consideration in this document.

1 For the purposes of this document, the term "emergency" includes both accidents and malevolent actions.

In the Table, the radionuclides are grouped according to the guideline levels rounded logarithmically by orders of magnitude. Guideline levels are defined for two separate categories "infant foods" and "other foods". This is because, for a number of radionuclides, the sensitivity of infants could pose a problem. The guideline levels have been checked against age-dependent ingestion dose coefficients defined as committed effective doses per unit intake for each radionuclide, which are taken from the "International Basic Safety Standards" (IAEA, 1996)[2].

Multiple radionuclides in foods: The guideline levels have been developed with the understanding that there is no need to add contributions from radionuclides in different groups. Each group should be treated independently. However, the activity concentrations of each radionuclide within the same group should be added together[3].

Annex 1

SCIENTIFIC JUSTIFICATION FOR PROPOSED DRAFT REVISED GUIDELINE LEVELS FOR RADIONUCLIDES IN FOODS CONTAMINATED FOLLOWING A NUCLEAR OR RADIOLOGICAL EMERGENCY

The proposed draft revised Guideline Levels for Radionuclides in Foods and specifically the values presented in Table 1 above are based on the following general radiological considerations and experience of application of the existing international and national standards for control of radionuclides in food.

Significant improvements in the assessment of radiation doses resulting from the human intake of radioactive substances have become available since the Guideline Levels were issued by the Codex Alimentarius Commission in 1989[4] (CAC/GL 5-1989).

Infants and adults: The levels of human exposure resulting from consumption of foods containing radionuclides listed in Table 1 at the suggested guideline levels have been assessed both for infants and adults and checked for compliance with the appropriate dose criterion.

In order to assess public exposure and the associated health risks from intake of radionuclides in food, estimates of food consumption rates and ingestion dose coefficients are needed. According to Ref. (WHO, 1988) it is assumed that 550 kg of food is consumed by an adult in a year. The value of infant food and milk consumption during first year of life used for infant dose calculation equal to 200 kg is based on contemporary human habit assessments (F. Luykx, 1990[5]; US DoH, 1998[6]; NRPB, 2003[7]). The most conservative values of the radionuclide-specific and age-specific ingestion dose coefficients, i.e. relevant to the chemical forms of radionuclides which are most absorbed from the gastro-intestinal tract and retained in body tissues, are taken from the (IAEA, 1996).

Radiological criterion: The appropriate radiological criterion, which has been used for comparison with the dose assessment data below, is a generic intervention exemption level of around 1 mSv for individual annual dose from radionuclides in major commodities, e.g. food, recommended by the International Commission on Radiological Protection as safe for members of the public (ICRP, 1999)[8].

---

2 Food and Agriculture Organization of the United Nations, International Atomic Energy Agency, International Labour Office, OECD Nuclear Energy Agency, Pan American Health Organization, World Health Organization (1996) International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, IAEA, Vienna.

3 For example, if ^{134}Cs and ^{137}Cs are contaminants in food, the guideline level of 1000 Bq/kg refers to the summed activity of both these radionuclides.

4 The Codex Alimentarius Commission at its 18th Session (Geneva 1989) adopted Guideline Levels for Radionuclides in Foods Following Accidental Nuclear Contamination for Use in International Trade (CAC/GL 5-1989) applicable for six radionuclides (^{90}Sr, ^{131}I, ^{137}Cs, ^{134}Cs, ^{239}Pu and ^{241}Am) during one year after the nuclear accident.

5 F. Luykx (1990) Response of the European Communities to environmental contamination following the Chernobyl accident. In: Environmental Contamination Following a Major Nuclear Accident, IAEA, Vienna, v.2, 269-287.

6 US DoHHS (1998) Accidental Radioactive Contamination of Human Food and Animal Feeds: Recommendations for State and Local Agencies. Food and Drug Administration, Rockville.

7 K. Smith and A. Jones (2003) Generalised Habit Data for Radiological Assessments. NRPB Report W41.

8 International Commission on Radiological Protection (1999). Principles for the Protection of the Public in Situations of Prolonged Exposure. ICRP Publication 82, Annals of the ICRP.

Naturally occurring radionuclides: Radionuclides of natural origin are ubiquitous and as a consequence are present in all foodstuffs to varying degrees. Radiation doses from the consumption of foodstuffs typically range from a few tens to a few hundreds of microsieverts in a year. In essence, the doses from these radionuclides when naturally present in the diet are unamenable to control; the resources that would be required to affect exposures would be out of proportion to the benefits achieved for health. These radionuclides are excluded from consideration in this document as they are not associated with emergencies.

One-year exposure assessment: It is conservatively assumed that during the first year after major environmental radioactive contamination caused by a nuclear or radiological emergency it might be difficult to readily replace foods imported from contaminated regions with foods imported from unaffected areas. According to FAO statistical data the mean fraction of major foodstuff quantities imported by all the countries worldwide is 0.1. The values in Table 1 as regards foods consumed by infants and the general population have been derived to ensure that if a country continues to import major foods from areas contaminated with radionuclides, the mean annual internal dose of its inhabitants will not exceed around 1 mSv (see Annex 2). This conclusion might not apply for some radionuclides if the fraction of contaminated food is found to be higher than 0.1, as might be the case for infants who have a diet essentially based on milk with little variety.

Long-term exposure assessment: Beyond one year after the emergency the fraction of contaminated food placed on the market will generally decrease as a result of national restrictions (withdrawal from the market), changes to other produce, agricultural countermeasures and decay.

Experience has shown that in the long term the fraction of imported contaminated food will decrease by a factor of a hundred or more. Specific food categories, e.g. wild forest products, may show persistent or even increasing levels of contamination. Other categories of food may gradually be exempted from controls. Nevertheless, it must be anticipated that it may take many years before levels of individual exposure as a result of contaminated food could be qualified as negligible.

Annex 2

ASSESSMENT OF HUMAN INTERNAL EXPOSURE WHEN THE GUIDELINE LEVELS ARE APPLIED

For the purpose of assessment of the mean public exposure level in a country caused by the import of food products from foreign areas with residual radioactivity, in implementing the present guideline levels the following data should be used: annual food consumption rates for infants and adults, radionuclide- and age-dependent ingestion dose coefficients and the import/production factors. When assessing the mean internal dose in infants and adults it is suggested that due to monitoring and inspection the radionuclide concentration in imported foods does not exceed the present guideline levels. Using cautious assessment approach it is considered that all the foodstuffs imported from foreign areas with residual radioactivity are contaminated with radionuclides at the present guideline levels.

Then, the mean internal dose of the public, E (mSv), due to annual consumption of imported foods containing radionuclides can be estimated using the following formula:

$$E = GL(A) \cdot M(A) \cdot e_{ing}(A) \cdot IPF$$

where:

GL(A) is the Guideline Level (Bq/kg)

M(A) is the age-dependent mass of food consumed per year (kg)

$e_{ing}(A)$ is the age-dependent ingestion dose coefficient (mSv/Bq)

IPF is the import/production factor[9] (dimensionless).

Assessment results presented in Table 2 both for infants and adults demonstrate that for all the twenty radionuclides doses from consumption of imported foods during the 1st year after major radioactive contamination do not exceed 1 mSv. It should be noted that the doses were calculated on the basis of a value for the IPF equal to 0.1 and that this assumption may not always apply, in particular to infants who have a diet essentially based on milk with little variety.

It should be noted that for ^{239}Pu as well as for a number of other radionuclides the dose estimate is conservative. This is because elevated gastro-intestinal tract absorption factors and associated ingestion dose coefficients are applied for the whole first year of life whereas this is valid mainly during suckling period recently estimated by ICRP to be as average first six months of life (ICRP, 2005[10]). For the subsequent six months of the first year of life the gut absorption factors are much lower. This is not the case for ^{3}H, ^{14}C, ^{35}S, iodine and caesium isotopes.

As an example, dose assessment for ^{137}Cs in foods is presented below for the first year after the area contamination with this nuclide.

For adults: $E = 1000\ Bq/kg \cdot 550\ kg \cdot 1.3 \cdot 10^{-5}\ mSv/Bq \cdot 0.1 = 0.7\ mSv$;

For infants: $E = 1000\ Bq/kg \cdot 200\ kg \cdot 2.1 \cdot 10^{-5}\ mSv/Bq \cdot 0.1 = 0.4\ mSv$

9 The import/production factor (***IPF***) is defined as the ratio of the amount of foodstuffs imported per year from areas contaminated with radionuclides to the total amount produced and imported annually in the region or country under consideration.

10 International Commission on Radiological Protection (2005) Doses to Infants from Radionuclides Ingested in Mothers Milk. To be published.

ASSESSMENT OF EFFECTIVE DOSE FOR INFANTS AND ADULTS FROM INGESTION OF MPORTED FOODS IN A YEAR

TABLE 2

Radionuclide	Guideline Level (Bq/kg)		Effective dose (mSv)	
	Infant foods	Other foods	1st year after major contamination	
			Infants	Adults
^{238}Pu	**1**	**10**	**0.08**	**0.1**
^{239}Pu			**0.08**	**0.1**
^{240}Pu			**0.08**	**0.1**
^{241}Am			**0.07**	**0.1**
^{90}Sr	**100**	100	**0.5**	**0.2**
^{106}Ru			**0.2**	**0.04**
^{129}I			**0.4**	**0.6**
^{131}I			**0.4**	**0.1**
^{235}U			**0.7**	**0.3**
^{35}S*	**1,000**	**1,000**	**0.2**	**0.04**
^{60}Co			**1**	**0.2**
^{89}Sr			**0.7**	**0.1**
^{103}Ru			**0.1**	**0.04**
^{134}Cs			**0.5**	**1**
^{137}Cs			**0.4**	**0.7**
^{144}Ce			**1**	**0.3**
^{192}Ir			**0.3**	**0.08**
^{3}H**	**1,000**	**10,000**	**0.002**	**0.02**
^{14}C			**0.03**	**0.3**
^{99}Tc			**0.2**	**0.4**

*This represents the value for organically bound sulphur.

**This represents the value for organically bound tritium.

See for "Scientific justification for the Guideline Levels" (Annex 1) and the "Assessment of human internal exposure when the Guideline Levels are applied" (Annex 2).

CHLOROPROPANOLS

Toxicological guidance: PMTDI 0.002 mg/kg bw (2001, for 3-chloro-1,2-propanediol); maintained in 2006. Establishment of tolerable intake was considered to be inappropriate for 1,3-dichloro-2-propanol because of the nature of the toxicity (tumorogenic in various organs in rats and the contaminant can interact with chromosomes and/or DNA). BMDL 10 cancer, 3.3 mg/kg bw/day (for 1,3-dichloro-2-propanol); MOE, 65000 (general population), 2400 (high level intake, including young.
children)

Residue definition: 3-MCPD

Synonyms: Two substances are the most important members of this group: 3-monochloropropane-1,2-diol (3-MCPD, also referred to as 3-monochloro- 1,2-propanediol) and 1,3-dichloro-2-propanol (1,3-DCP)

Commodity / Product		**Level**	**Suffix**	Type	Notes/Remarks
Code	**Name**	**mg/kg CAC**			
	Liquid condiments containing acid-hydrolyzed vegetable proteins (excluding naturally fermented soy sauce)	0.4		ML	
	Hydrolysed vegetable protein	0.002*			
	Soy sauce	0.002*			

ACRYLONITRILE

Toxicological guidance: Provisional Acceptance (1984, the use of food-contact materials from which acrylonitrile may migrate is provisionally accepted on condition that the amount of the substance migrating into food is reduced to the lowest level technologically attainable.)

Residue definition: acrylonitrile (monomer)

Synonyms: 2-Propenenitrile; vinyl cyanide (VCN); cyanoethylene; abbreviations, AN, CAN.

Commodity / Product		Level	Suffix	Type	Notes/Remarks
Code	Name	mg/kg			
	Food	0.02		GL	

Acrylonitrile monomer is the starting substance for the manufacture of polymers which are used as fibres, resins, rubbers and also as packaging material for o.a. foods. Acrylonitrile is not known to occur as a natural product. Acrylonitrile is classified by IARC as possibly carcinogenic to humans (Group 2B). Polymers derived from acrylonitrile may still contain small amounts of free monomer.

MELAMINE

Toxicological guidance: IDT 0.2 mg/kg bw

Commodity / Product Code	Name	Level µg/kg CAC	Suffix	Type	Notes/Remarks For Codex Alimentarius
	Food (other than infant formula).	2.5		ML	Note 1 The maximum level applies to levels of melamine resulting from its nonintentional and unavoidable presence in feed and food. The maximum level does not apply to feed and food for which it can be proven that the level of melamine higher than 2.5 mg/kg is the consequence of - authorised use of cyromazine as insecticide. The melamine level shall not exceed the level of cyromazine. - migration from food contact materials taking account of any nationally authorised migration limit. Note 2 The maximum level does not apply to melamine that could be present in the following feed ingredients / addtives: guanidino acetic acid (GAA), urea and biuret, as a result of normal proceduction processes.
	Powdered Infant formula	1		ML	

VINYL CHLORIDE MONOMER

Toxicological guidance: Provisional Acceptance (1984, the use of food-contact materials from which vinyl chloride may migrate is provisionally accepted, on condition that the amount of the substance migrating into food is reduced to the lowest level technologically

Residue definition: Vinylchloride monomer

Synonyms: Monochloroethene, chloroethylene; abbreviation VC or VCM

Related Code of Practice: Code of Practice for Source Directed Measures to Reduce Contamination of Foods with Chemicals (GSO)

Commodity / Product		Level	Suffix	Type	Notes/Remarks
Code	Name	mg/kg			
	Food	0.01		GL	The GL in food packaging material is 1.0 mg/kg.

Vinylchloride monomer is the main starting substance for the manufacture of polymers which are used as resins, as packaging material for foods. Vinyl chloride is not known to occur as a natural product. Residues of VCM may be still present in the polymer. Vinyl chloride is considered to be a human carcinogen.

References

Codex Alimentarius Commission	
	CAC/RCP 49-2001
	CAC/RCP 50-2003
	CAC/RCP 51-2003
	CAC/RCP 56-2004
	CAC/RCP 60-2005
	CAC/RCP 63-2007
	CAC/RCP 64 – 2008
	Codex Committee on Pesticide Residues (CCPR)
	Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF)
	Codex Committee on Food Hygiene (CCFH)
	Codex Committee on Food Additives (CCFA)
	Codex Committee on Contaminants in Foods (CCCF)
	General Standard for Contaminants and Toxins in Foods (GSCTF)
	Codex MRLs

Codex Alimentarius Commission	CS 13-1981
	CS 16-1981
	CS 15-1981
	CS 18-1981
	CS 19-1981
	CS 32-1981
	CS 33-1981
	CS 42-1981
	CS 55-1981
	CS 56-1981
	CS 57-1981
	CS 58-1981
	CS 60-1981
	CS 62-1981
	CS 66-1981
	CS 68-1981
	CS 78-1981
	CS 79-1981
	CS 81-1981
	CS 98-1981
	CS 99-1981
	CS 108-1981
	CS 115-1981
	CS 116-1981
	CS 135-1981
	CS 144-1985
	CS 145-1985
	CS 150-1985
	CS 159-1987
	CS 160-1987
	CS 210-1999
	CS 211-1999
	CS 242-2003
	CS 254-2007
	CS 296-2009
	CS 297-2009

JECFA	28(1984)
	FAO/WHO Expert Meeting, 2008
	41 (1993; for 1,3-dichloro-2-propanol only), 57 (2001), 67 (2006)
	10 (1966), 14 (1970), 15 (1971), 19 (1975), 22 (1978), 26(1982), 33(1988), 55 (2000), 64 (2005)
	22 (1978), 33 (1988), 53 (1999), 61 (2003)
	10 (1966), 14 (1970), 16 (1972), 22 (1978)
	10 (1966), 16 (1972), 22 (1978), 30 (1986), 41 (1993), 53 (1999)
	22 (1978), 33 (1988), 53 (1999), 61 (2003)
	16 (1972), 33 (1988), 41 (1993), 55 (2000), 61 (2003), 64 (2005).
	(1):5 (1960), 10 (1967), 27 (1983), 33 (1988).
	37 (1990), 44 (1995), 56 (2001), 68 (2007)

Regulation (EC)	No. 466/2001, 2006R1881, (EU)165/2010 of 26 Feb 2010
	No. 2006R1881, (EU)165/2010 of 26 Feb 2010
	2006R1881-EN-01.07.2010-004.001-1.
	No 1126/2007 of 28 September 2007.
	2006R1881-EN-01.07.2010-004.001-1.
	No 1126/2007 of 28 September 2007.
	2006R1881-EN-01.07.2010-004.001-1.
	2006R1881-EN-01.07.2010-004.001-1.
	No 853/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific hygiene rules for food of animal origin (OJ L 226, 25.6.2004, p. 22).

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية
STANDARDIZATION ORGANIZATION FOR G.C.C (GSO)

Final Draft

GSO /FDS 1016 / 2014

المعايير الميكروبيولوجية للسلع والمواد الغذائية
MICROBIOLOGICAL CRITERIA FOR FOODSTUFFS

THIS STANDARD IS A DRAFT GULF STANDARD CIRCULATED FOR COMMENTS. IT IS, THEREFORE, SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS A GULF STANDARD UNTIL APPROVED BY THE BOARD OF DIRECTORS.

MICROBIOLOGICAL CRITERIA FOR FOODSTUFFS

Date of GSO Board of Directors' Approva :
Issuing Status : Technical Regulation

Foreword

GCC Standardization Organization (GSO) is a regional Organization which consists of the National Standards Bodies of GCC member States. One of GSO main functions is to issue Gulf Standards/Technical regulations through specialized technical committees (TCs).

GSO through the technical program of committee TC No. 5 "technical committee for standards of food and agriculture products" has updated the GSO Standard No. (1016/1998) "Microbiological criteria for foodstuffs – Part 1". The draft standard has been prepared by State of Qatar.

This standard has been approved as Gulf Technical Regulation by GSO Board of Directors in its meeting No.../....held on / / H, / / G. The approved standard will replace and supersede the standard No.(GSO 1016/1998).

CONTENTS

Page

PREFACE

This GSO technical regulation is concerned with the microbiological criteria for foodstuffs and for some food ingredients used as raw materials in food processing. These limits are based on those proposed by the international commission of microbiological specifications for foods (ICMSF) and the international standards in the field of food safety and quality. Components of microbiological criterion in particular food are chosen according to the following factors:

1) The seriousness of the type of health hazard on consuming a contaminated food.
2) Available information on treatments the food products was subjected to, and the conditions of its handling and storage expected.
3) Type of changes or spoilage to the foodstuffs.
4) The environmental conditions within which the food product was produced or circulated.
5) The category or categories of consumers concerned.

These limits were formulated in the form of a system known as working of sample, including levels of acceptance and the number of samples to be analyzed. These criteria show stringency according to the type of food product, and the purpose for which it is used; for instance, the food products intended for consumer groups with increased susceptibility e.g. children, infants, aged people, or dietetic foods and relief foods, such as low sugar and low fat foods. In such cases the microbial sampling plans employed are more stringent.

Precautions are being taken that these limits be within attainable limits in production units by following good manufacturing practice (GMP). This standard of microbiological quality will have to be followed for any food product irrespective of any specific parameters mentioned in any other standards of specific food product, *i.e.* any standard specific to any product should comply with the limits stipulated in this standard with respect to microbial quality.

MICROBIOLOGICAL CRITERIA FOR FOODSTUFFS

1. SCOPE

This GSO technical regulation is concerned with microbiological limits for some foodstuffs intended for human consumption and for some food ingredients used in food industry.

2. COMPLEMENTARY REFERENCES

2.1 GSO 261 Microbiological methods of food examination - Part 1: Preparation of samples

2.2 GSO 1373 Microbiological methods for testing of foods Part 2: Direct microscopic count.

2.3 GSO 590 Microbiological methods of food examination Part 3: Commercial sterility test for canned food.

2.4 GSO 810 Microbiology- General guidance for microbiological examinations.

2.5 GSO CAC/GL 63 Principles and guidelines for the conduct of microbiological risk management (MRM).

2.6 GSO ISO 19458 Water quality- Sampling for microbiological analysis.

2.7 Refer to GSO standards test methods for the microbiological analysis in food products.

3. DEFINITIONS

3.1 **Microbiological criteria**

A criterion defining the acceptability of a product, a batch of foodstuffs or a process, based on the absence, presence or number of microorganisms, and/or on the quantity of their toxins/ metabolites, per unit(s) of mass, volume, area or batch.

3.2 **Lot**

A definitive quantity of a commodity produced essentially under the same conditions.

3.3 **Sampling plan**

A statement specifying the microbiological criteria for acceptance or rejection of the sample depending on the examination of a sufficient number of sample units via particular analytical methods. It comprises the following:

n = Number of sample units to be examined.

c = The maximum number of sample units allowed to have a microbiological criterion value greater than "m" and not to exceed the value of "M".

m = The acceptable microbial level in the sample unit; which separates the acceptable quality of marginal-quality acceptance. The product shall be

acceptable if the value is equal to or less than "m"; if the value is above "m", the product is marginally acceptable or rejected.

M = The maximum criterion value that should not be exceeded in any of "n" units.

Sample unit = A sample from the food product examined as one unit from "n". It is either a single or a part of a package or a mixed compound of the product.

3.3.1 **Two-class attributes plan**

The plan provides a simple means of inspection where the sampling plan is defined by two values, "n" and "c". "n" is the number of sample units to be examined to meet the plan's requirements. "c" is the maximum number of the defective sample units. "m" for microbial criteria to identify defects. For example; inspection of the presence of *Salmonella* in 25 g of fresh vegetables; should not be detected in ten sample units (n = 10, c = 0, m = 0).

3.3.2 **Three-class attributes plan**

The plan attributes are defined by the values "n", "c", "m" and "M". "m" is the minimum acceptable value of microorganism in the examined units. "M" differentiates between samples minimally acceptable of the defective units. For example; the number of colony forming unit (CFU) of any of the five sample units tested must not exceed 10^6 and not more than 3×10^4 from three or more of the five samples tested (n= 5, c= 2, m= 3×10^4, M= 10^6).

3.4 **Defect sample**

The Sample unit that gives a microbiological criterion value higher than the value of "M".

3.5 **Marginally acceptable**

Sample units have a microbial count higher than "m" but not more than "M".

4. REQUIREMENTS

4.1 Microbiological criteria for foodstuffs and food ingredients shall be as indicated against each in the table.

5. CRITERIA OF TECHNICAL CONFORMITY

5.1 Samples are considered unacceptable in the following cases:

5.1.1 When the microbiological criterion value exceeds "M" in one or more sample units "n".

5.1.2 If the number of marginally acceptable samples is higher than c value set in the sampling plan.

Microbiological criteria for foods and food ingredients

1. Dairy Products

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Pasteurized milk (with or without added flavour)	– Aerobic plate count	5	1	$3x10^4$	10^5
	– Enterobacteriaceae	5	2	3	5
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
UHT milk- (with or without added flavour)	– Incubation at 37 ^oC/15 days or 55 ^oC/7days:				
	– Aerobic plate count	5	0	10	–
	– Enterobacteriaceae	5	0	0	–
	– *Salmonella**	10	0	0	–
Fermented milk products (with or without added flavour), e.g. yoghurt, laban, labena	– Yeasts and moulds	5	1	10	10^2
	– Enterobacteriaceae	5	1	5	10
	– *Escherichia coli*	5	0	0	–
	– *Salmonella**	5	0	0	–
	– *Staphylococcus aureus*	5	2	10	10^2
Condensed and sweeten condensed milk	– Aerobic plate count	5	2	10^2	10^3
	– Enterobacteriaceae	5	1	0	–
	– *Staphylococcus aureus*	5	1	5	10
Evaporated milk	Requirements for canned products (Item 8) shall be applied				
Pasteurized cream (with or without added flavour)	– Aerobic plate count	5	1	$5x10^4$	10^5
	– Yeasts and moulds	5	1	20	10^2
	– Enterobacteriaceae	5	1	10	20
	– *Escherichia coli*	5	0	0	–
	– *Salmonella**	5	0	0	–
Whipped cream	– Aerobic plate count	5	2	$5x10^4$	$5x10^5$
	– Enterobacteriaceae	5	1	10	20
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
Fermented cream	– Yeasts and moulds	5	1	10	10^2
	– Enterobacteriaceae	5	1	10	20
	– *Escherichia coli*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2

* Only in the case of added flavour.

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Sterilized cream	Requirements for canned products (Item 8) shall be applied				
Powdered milk (skimmed, semi-skimmed), whey (dried or powdered condensed)	– Aerobic plate count	5	2	$5x10^4$	$3x10^5$
	– Enterobacteriaceae	5	1	10	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
Powdered whipped cream (with or without added flavour	– Aerobic plate count	5	2	10^4	10^5
	– Yeasts and moulds	5	1	10	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
Soft cheese (made from pasteurized milk)	– Enterobacteriaceae	5	2	10^2	10^3
	– *Escherichia coli*	5	1	10	10^2
	– *Salmonella*	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^3
Hard and semi–hard cheese	– Enterobacteriaceae	5	1	10^2	10^3
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10^2	10^3
Processed cheese packed in non-metal containers	– Aerobic plate count	5	2	10^3	10^4
	– Enterobacteriaceae	5	1	10	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
Caseinate	– Aerobic plate count	5	2	$3x10^4$	$2x10^5$
	– Enterobacteriaceae	5	1	10	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
Edible ices (Ice cream (with nut*)– ice milk –water ice)	– Aerobic plate count	5	2	$5x10^4$	10^5
	– Moulds*	5	2	10^2	10^4
	– Enterobacteriaceae	5	2	10	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
Dehydrated ice cream mixes	– Aerobic plate count	5	2	$5x10^4$	$2x10^5$
	– Enterobacteriaceae	5	1	10	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	10	0	0	–
Milkshakes	– Coliforms	5	2	1	10
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10	10^2

* In case of ice cream containing nuts.

2. Infants, Children and Certain Categories of Dietetic Foods

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Biscuits (plain, dried)	– Enterobacteriaceae	5	1	0	10^2
	– Yeasts and moulds	5	1	50	10^2
	– *Salmonella*	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
	– *Bacillus cereus*	5	2	10^2	10^3
Shelf–stable dried biscuits coated or filled with chocolate or others	– Enterobacteriaceae	5	1	10	10^2
	– *Salmonella*	30	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
	– *Bacillus cereus*	5	1	10^2	10^3
Dried and instant products requiring reconstitution	– Aerobic plate count	5	1	10^4	10^5
	– Enterobacteriaceae	10*	0	0	–
	– *Salmonella*	60	0	0	–
	– *Escherichia coli* O157**	5	0	0	–
	– *Cronobacter sakazakii* (infant food 6 months and younger)	30	0	0	–
	– *Staphylococcus aureus*	5	0	0	–
	– *Bacillus cereus****	5	1	10^2	10^3
	– *Clostridium perfringens*****	5	1	10	10^2
Cereal based foods for infant	– Aerobic plate count*	5	2	10^3	10^4
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
	– *Bacillus cereus*	5	1	10^2	10^3
	– *Listeria monocytogenes*	5	0	0	–
	– *Clostridium perfringens*	5	1	10	10^2
Powdered infant formula, including those with lactic acid-producing cultures	– Enterobacteriaceae	10	2	0	10^2
	– *Salmonella*	5	0	0	–
	– *Cronobacter sakazakii* (infant food 6 months and younger)	30	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
	– *Bacillus cereus*	5	1	0	10
	– *Listeria monocytogenes*	5	0	0	–
	– *Clostridium perfringens*	5	2	1	10
Dried products requiring heating to boiling before consumption	– Aerobic plate count	5	3	10^5	10^6
	– Enterobacteriaceae	10	2	0	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	15	0	0	–
	– *Cronobacter sakazakii* (infant food 6 months and younger)	30	0	0	–
	– *Bacillus cereus****	5	2	10^2	10^3

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
	– *Clostridium perfringens*****	5	2	10	10^2
Thermally processed products in sealed containers	Shall meet the microbiological requirements for canned foods specified in this standard (8)				
Dietetic foods to be eaten by high risk category of consumers (according to the type of the product)	– Aerobic plate count	5	1	10^3	10^4
	– *Escherichia coli*	5	2	0	10
	– *Salmonella*	60	0	0	–
	– *Escherichia coli* O157****	5	0	0	–
	– *Campylobacter jejuni*/25 g	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	10	1	10	10^2
	– *Bacillus cereus*	10	1	10^2	10^3
	– *Clostridium perfringens*	10	1	10^2	10^3
Body building foods	– Aerobic plate count	5	0	0	10^4
	– Yeasts and moulds	5	0	0	$3x10^2$
	– Coliforms	5	0	0	10
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	0	0	–

* 10 samples for infant younger than 6 months, 5 samples for infants older than 6 months

** Optional

*** In case of the product contains milk and/or rice

**** In case of the products contains meat

3. Meat, Poultry and its Products

Item	Microorganisms	Limit per gram or cm^2*			
		n	c	m	M
Raw meat (chilled/frozen); whole or half carcasses; pieces with or without bones	– Aerobic plate count	5	2	10^5	10^6
	– *Salmonella*	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
Fresh poultry (chilled/ frozen)	– Aerobic plate count	5	3	$5x10^5$	$5x10^6$
	– *Salmonella***	5	1	0	–
	– *Campylobacter jejuni****	5	0	0	–
Raw minced (meat and poultry);chilled/frozen	– Aerobic plate count*****	5	2	$5x10^5$	$5x10^6$
	– Enterobacteriaceae	5	2	10^2	10^3
	– *Salmonella*	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Staphylococcus aureus****	5	2	10^2	10^3
	– *Clostridium perfringens******	5	2	10^2	10^3
Raw minced/pieces meat (chilled/ frozen) with soy or marinated (e.g. kubba; meat balls, fresh sausage, meat burgers)	– Aerobic plate count	5	3	10^6	10^7
	– *Salmonella*	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Staphylococcus aureus*	5	2	$5x10^2$	10^3
	– *Clostridium perfringens*	5	2	10^2	10^3
Raw edible offal (chilled/frozen) e.g. liver testes, kidney, gizzard	– Aerobic plate count	5	2	10^5	10^6
	– *Salmonella*	5	0	0	–
Cured and/or smoked meat; mortadella; luncheon meat, basterma	– Aerobic plate count	5	3	$5x10^5$	$5x10^6$
	– *Salmonella*	10	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	2	$5x10^2$	$5x10^3$
	– *Bacillus cereus*	5	2	10^2	10^3
	– *Clostridium perfringens*	5	2	10^2	10^3
Cured and/or smoked poultry meat; mortadella, frankfurters, turkey, smoked turkey breast	– Aerobic plate count	5	3	10^4	10^5
	– *Salmonella*	10	0	0	–
	– *Campylobacter jejuni*	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	10	2	10^3	10^4
	– *Bacillus cereus*	5	2	10^2	10^3
	– *Clostridium perfringens*	5	2	10^2	10^3

*Limit per cm^2 in case of red meat only

** Sample is rejected if the sample unit is positive to *Salmonella typhimurium* and *Salmonella enteritidis* test.

*** In case of chilled minced meat and chilled poultry.

**** This criterion shall not apply to minced meat produced at retail level when the shelf-life of the product is less than 24 hours.

***** Optional.

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Cooked sausages	– Aerobic plate count	5	2	10^4	10^5
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^3
	– *Clostridium perfringens*	5	2	10^2	10^3
Cooked poultry meat, frozen to be reheated before eating (e.g. prepared frozen meals; chicken burgers; chicken/ turkey rolls, chicken nuggets, others breaded poultry products	– Aerobic plate count	5	3	10^4	10^5
	– *Salmonella*	5	0	0	–
	– *Campylobacter jejuni**	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10^3	10^4
	– *Bacillus cereus**	5	2	10^2	10^3
	– *Clostridium perfringens**	5	2	10^2	10^3
Meat & poultry soup (concentrated, powder)	– Aerobic plate count	5	1	10^4	10^5
	– Enterobacteriaceae	5	1	10	10^2
	– *Salmonella*	10	0	0	–
	– *Bacillus cereus***	5	1	10^3	10^4
	– *Clostridium perfringens*	5	1	10^2	10^3
Dehydrated meat or meat components; protein concentrates from meat	– *Salmonella*	10	0	0	–
	– *Listeria monocytogenes**	5	0	0	–
	– *Staphylococcus aureus*	5	3	10^2	10^3
	– *Clostridium perfringens*	5	2	10^2	10^3
Vacuum packed-semi-preserved but perishable meat and poultry products	– Aerobic plate count	5	2	10^6	10^7
	– *Salmonella*	5	0	0	–
	– *Campylobacter jejuni*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10^2	10^3
	– *Clostridium perfringens*	5	2	10	10^2

* Optional

** In case of products containing rice or corn flour as ingredient.

4. Fish and Shellfish their Products

Item	Microorganisms	Limit per gram or cm^2			
		n	c	m	M
Raw fish and its products (chilled/frozen) e.g. fish blocks, comminuted, minced, and sliced	– Aerobic plate count	5	2	10^5	10^6
	– *Escherichia coli*	5	3	10	$5x10^2$
	– *Vibrio parahaemolyticus*	5	0	10^2	10^3
	– *Clostridium botulinum*	5	0	0	–
	– *Aeromonas spp.*	5	0	10^2	10^3
Raw (chilled/ frozen) crustaceans (e.g. shrimp, prawns, lobsters and crab)	– Aerobic plate count	5	2	$5x10^5$	10^7
	– *Escherichia coli*	5	3	10	$5x10^2$
	– *Salmonella*	5	0	0	–
	– *V. parahaemolyticus*	5	1	10^2	10^3
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10^2	10^3
Live mollusks such as bivalve (oysters, clams, mussels, etc.), cephalopods (squids, cuttlefish, octopus, etc.), gastropods (snails, etc.)	– *Escherichia coli*	5	1	$2.3x10^2$	$7x10^2$
	– *Salmonella*	5	0	0	–
	– *V.parahaemolyticus* *	10	1	10^2	10^3
Frozen/chilled breaded fish, crustaceans and mollusks products (e.g. fish sticks (fingers), fish protein, and fish cakes)	– Aerobic plate count	5	2	$5x10^5$	10^7
	– *Escherichia coli*	5	2	10	$5x10^2$
	– *Salmonella**	5	0	0	–
	– *V. parahaemolyticus*	5	1	10^2	10^3
	– *Staphylococcus aureus*	5	1	10^3	10^4
Smoked fish including herring, cooked prior to eating and eaten uncooked	– Aerobic plate count	5	3	10^5	10^6
	– *Escherichia coli*	5	3	10	$5x10^2$
	– *V. parahaemolyticus*	5	0	10^2	10^3
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10^3	10^4
Dried sea food, dehydrated fish and fish protein	– Aerobic plate count	5	2	10^5	10^6
	– Yeasts and moulds	5	2	10^2	10^4
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^3
	– *Clostridium perfringens*	5	1	10^2	10^3
Salted and/or fermented fish	– Aerobic plate count	5	2	10^5	10^6
	– *Escherichia coli*	5	1	10	4×10^2
	– *Escherichia coli* O157	5	0	0	–
	– *Salmonella*	10	0	0	–
	– *V. parahaemolyticus*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
	– *Clostridium perfringens*	5	1	10^2	10^4
Cooked (chilled/ frozen) crustaceans, molluscans	– Aerobic plate count	5	2	10^5	10^6
	– *Escherichia coli*	5	1	10	$5x10^2$
	– *Salmonella*	5	0	0	–
	– *V. parahaemolyticus*	10	1	10^2	10^3
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^3

* Optional

5. Egg and Egg Products

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Fresh whole eggs	– Enterobacteriaceae	5	2	10	10^2
	– *Salmonella*	10	0	0	–
	_ *Campylobacter jejuni*	5	0	0	–
Liquid pasteurised egg (whole, yolk or white), chilled or frozen	– Aerobic plate count	5	2	10^4	10^5
	– Enterobacteriaceae	5	1	10	10^2
	– *Salmonella*	5	0	0	–
	– *Campylobacter jejuni*	5	0	0	–
Any egg product intended for special dietary purposes (infants, aged, relief foods, etc.)	– Aerobic plate count	5	1	$5x10^4$	10^6
	– Enterobacteriaceae	5	2	10	10^2
	– *Salmonella*	30	0	0	–
Pudding with egg (powders)	– Aerobic plate count	5	2	10^4	10^5
	– Enterobacteriaceae	5	2	10	10^2
	– *Escherichia coli*	5	2	0	10
	– *Salmonella*	10	0	0	–
	_ *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^3
	– *Bacillus cereus*	5	2	10^2	10^3
	– *Clostridium perfringens*	5	2	10	10^2
Egg mix dehydrated	– Aerobic plate count	5	2	10^4	10^5
	– Enterobacteriaceae	5	2	10	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	0	10	–
Dried cake mixes with high egg content	– Enterobacteriaceae	5	2	10	10^2
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^3
	– *Bacillus cereus*	5	0	10^2	–

6. Fats and Oils

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Butter (Salted and Unsalted)	– Lipolytic bacteria	5	1	10^2	10^3
	– Enterobacteriaceae	5	1	10	20
	– Yeasts and moulds	5	1	10	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	0	0	–
Ghee (Butter oil) Fats from milk	– Enterobacteriaceae	5	1	0	10
	– Yeasts and moulds	5	0	10	–
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	0	10
Margarine	– Aerobic plate count	5	2	10^4	10^5
	– Yeasts and moulds	5	1	50	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	0	0	–
All kinds of Nut butters	– Aerobic plate count	5	2	10^3	10^4
	– Moulds	5	2	$5x10^1$	$5x10^2$
	– Enterobacteriaceae	5	2	10	10^2
	– *Salmonella*	10	0	0	–

7. Tomato Concentrates, Sauces, Vinegar, Spices and Herbs

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
All kinds of canned tomato products	Requirements for canned products (Item 8) shall be applied				
All kinds of tomato products	– Moulds	5	2	0	–
	– *Salmonella**	5	0	0	–
Mayonnaise, mustard, salad sauce and other sauces	– Aerobic plate count	5	2	10^3	10^4
	– Yeasts and moulds	5	2	20	10^2
	– Enterobacteriaceae	5	1	10	10^2
	– *Escherichia coli*	5	2	2	10
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
Vinegar	– Aerobic plate count	5	1	30	10^2
Dried herbs and Spices, ready to eat herbs and spices	– Aerobic plate count	5	2	10^5	10^6
	– Moulds	5	2	10^5	10^6
	– Faecal Coliforms	5	2	10	10^2
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^3
	– *Bacillus cereus*	5	2	10^3	10^4
	– *Clostridium perfringens*	5	2	10^2	10^3
Dried herbs (roselle, camomile, others)	– Aerobic plate count	5	2	10^3	10^4
	– Anerobic plate count	5	2	10^2	10^3
	– Yeasts and moulds	5	2	0	10^2
	– Coliforms	5	1	10^2	10^4
All types of tea	– Coliforms	5	1	10	10^2
Coffee and derivatives	– Yeasts and moulds	5	2	10^2	10^3
	– Coliforms	5	1	10	10^2

*Optional

8. Canned Foods and Ingredients for Canning

Commercially sterilized canned foods shall pass sterility test described in GSO 590/1995 "Microbiological Methods of Foods Examination – Commercial Sterility Test for Canned Food", in accordance with the following procedure:

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
First Action	– Must be the number of cans tested 24 cans and the absence of defects; lock; welding or swelling during incubation indicates the efficiency of the commercial sterilization process and the safety of batch production.	24	–	0	–
Second Action	– When there are 1-2 defective cans or swelling should; therefore larger numbers of cans should be sorted from the batch. – In case of presence of more than 1 % of defective cans; reject the batch, but the presence of 1 % or less; the third action is taken.	–	1 %	0	–
Third Action	– Examine 24 cans during the incubation period for not less than 10 days in the incubator at a temperature of 30-37 °C for non-acid canned, or in the incubator at 25 °C for acidic canned. – Production is not identical in the case of a can or more defective or welding or swelling after incubation.	24	0	0	–
Fourth Action	– Being in the absence of any swelling or defects lock and welding after the third action. – Open and lifting the welding and examine 10 cans. – Accept the batch in the absence of any defects in the weld or lock.	10	0	0	–

* Food products being used in the manufacture of canned food:

Flour - milk - sugars - pectin - acids - beans - starch – cereals by products

Microorganisms	**Limit per ml or gram**			
	n	c	m	M
Thermophilic bacteria:	5 units must be examined; 10 g each			
1- Aerobic	5	125/10 g	150/10 g	
2- Flat- sour bacteria	5	50/10 g	75/10 g	
3- Anaerobic non H_2S producing	5	3 samples negatives		
4- Anaerobic H_2S producing	5	4 samples negatives		

9. Cereals; Legumes and their Products

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Cereal grains	– Moulds	5	2	10^2	10^4
	– *Salmonella*	5	0	0	–
Cereals, cereal flours and by-products such as bran	– Moulds	5	2	10^2	10^4
	– *Bacillus cereus*	5	2	10^3	10^4
	– *Clostridium perfringens*	5	0	10^2	–
Soya flours, concentrates and isolates	– Moulds	5	2	10^2	10^4
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Bacillus cereus*	5	0	10^2	–
Starch and starch containing products (e.g. custard powder)	– Aerobic plate count*	5	2	10^4	10^5
	– Yeasts and moulds	5	2	10^2	10^3
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10	10^2
	– *Bacillus cereus*	5	1	10^3	10^5
	– *Clostridium perfringens*	5	0	10^2	–
Pasta / Macaroni & Noodles (uncooked, wet & dry) with or without filling	– Coliforms*	5	2	10	10^2
	– Yeasts and moulds	5	2	10^2	10^3
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Bacillus cereus*	5	2	10^2	10^3
	– Sulphite-reducing *Clostridia*	5	2	20	10^2
Pizza, meat pies, frozen dough with or without filling	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^4
Bread	– Yeast and moulds	5	1	$2x10^3$	10^4
	– Enterobacteriaceae	5	1	50	10^2
Special breads (sweetened) with egg, or milk	– Yeasts and moulds	5	1	10^3	$2x10^3$
	– Enterobacteriaceae	5	1	50	10^2
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
Cakes and bakery products (ready to eat)	– Aerobic plate count	5	2	10^4	10^5
	– Enterobacteriaceae	5	1	10^2	10^3
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	20	0	0	–
	– *Listeria monocytogenes**	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
	– *Bacillus cereus*	5	0	10	–
Puffed, flaked cereal Products	– Aerobic plate count	5	1	10^4	10^5
	– Moulds	5	1	10^2	10^4
	– *Salmonella*	5	0	0	–
	– *Bacillus cereus*	5	1	10^4	10^5
	– *Clostridium perfringens*	5	0	0	–

* Optional

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Entrees (soup) containing rice or corn flour as main ingredient (frozen or dried)	– *Bacillus cereus*	5	1	10^3	10^4
Cakes, desserts and bakery products (frozen or dehydrated)	– Aerobic plate count	5	2	10^4	10^6
	– *Escherichia coli*	5	2	0	10
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10	10^2
Malt, Malt derivatives	– Aerobic plate count	5	1	$5x10^4$	10^5
	– Yeasts and moulds	5	1	10^3	$5x10^3$
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^3

10. Fruit and Vegetables

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Fresh fruits and vegetables (precut and crudités) to be consumed raw	– *Escherichia coli*	5	2	10	10^2
	– *Salmonella*	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10^2	10^3
Dried vegetables	– *Escherichia coli*	5	2	10^2	10^3
Dried fruits; dates (including date paste), figs, apricot, grape (raisons), etc)	– Yeasts	5	2	10	10^2
	– Moulds	5	2	10^2	10^3
	– *Escherichia coli*	5	2	0	10
	– *Salmonella*	5	0	0	–
Frozen vegetables and frozen fruits, pH equal or higher than 4.5	– *Escherichia coli*	5	2	10^2	10^3
Frozen vegetables and frozen fruits, pH less than 4.5	pH measured at the time of sampling	pH values shall be less than 4.5 in all tested samples			
Vegetable soup (powder)	– Aerobic plate count	5	1	10^4	10^5
	– Yeasts and Moulds	5	1	10^2	10^3
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Bacillus cereus*	5	1	10^3	10^4
	– *Clostridium perfringens*	5	1	10^2	10^3
Pickled/Fermented vegetable/Fruits (e.g. sauerkraut, pickles, table olive, etc.)	– Yeasts	5	0	0	2
	– Moulds	5	0	0	–
Fried potatoes (e.g. chips, fingers, etc.)	– Aerobic plate count	5	1	$5x10^4$	10^5
	– *Salmonella*	5	0	0	–
	– *Bacillus cereus*	5	1	10^4	10^5
	– *Clostridium perfringens*	5	0	0	–
Concentrated tamarind	– Moulds	5	0	0	–
	– *Escherichia coli*	5	0	0	–

11. Jelly, Jam and Marmalade

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Jam, jelly and marmalade	– Yeasts and moulds	5	1	10^3	10^4
Jelly powder	– *Salmonella*	5	0	0	–
Fruit whole/pieces in sugar syrup (canned)	Requirements for canned products (Item 8) shall be applied				

12. Chocolate, Sweets and their Ingredients

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Chocolate (plain or sweetened- with milk, or filled or covered with nuts), toffee, nougat, fudge etc.	– Aerobic plate count	5	2	10^4	10^6
	– Enterobacteriaceae	5	2	0	10
	– *Salmonella*	10	0	0	–
Dehydrated desserts, (bonbons, caramels and other similar products)	– Aerobic plate count	5	2	10^4	10^6
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10	10^3
Hard & soft candy	– Aerobic plate count	5	2	0	$5x10^3$
	– Yeasts and moulds	5	2	0	10^2
	– Enterobacteriaceae	5	0	0	–
	– *Salmonella*	5	0	0	–
Cocoa	– Yeasts and moulds	5	2	10^2	10^4
	– Enterobacteriaceae	5	2	0	10
	– *Salmonella*	10	0	0	–
Coconut (grated/desiccated)	– Moulds	5	2	10	10^2
	– Enterobacteriaceae	5	2	10^2	10^4
	– *Salmonella*	10	0	0	–
Nuts	– Moulds	5	2	10^2	10^4
	– *Escherichia coli*	5	2	0	10
Chewing gum	– Yeasts and moulds	5	1	$5x10^2$	10^3
	– *Salmonella*	5	0	0	–
Honey	– Yeasts and moulds	5	1	10^2	10^3
	– Sulphite-reducing anaerobes	5	2	10^2	10^3
	– *Clostridium botulinum**	5	0	0	–
Arabic sweets	– Coliforms	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Listeria monocytogenes**	5	0	0	–
	– *Staphylococcus aureus*	5	0	0	–
Molasses, debs (date syrup), hard brown sugar	– Yeasts and moulds	5	1	$5x10^2$	10^3
	– *Escherichia coli*	5	1	0	10
	– *Salmonella*	5	0	0	–
Concentrated cane syrup	– Yeasts and moulds	5	1	–	10
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–

* Optional

13. Ingredients for Food Industries

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Enzymes	– *Escherichia coli*	5	2	0	10
	– *Salmonella*	10	0	0	–
Dyes (food colours)	– Aerobic plate count	5	2	10^4	10^6
	– *Salmonella*	10	0	0	–
Gums	– Aerobic plate count	5	2	10^4	10^6
	– Enterobacteriaceae	5	2	10	10^3
Eggs products	– Aerobic plate count	5	2	10^4	10^6
	– *Salmonella*	10	0	0	–
	– Enterobacteriaceae	5	2	10	10^2
Yeasts	– Spores of rope-forming bacteria	5	1	10^2	10^3
	– *Escherichia coli*	5	2	0	10
	– *Salmonella*	20	0	0	–
Gelatine	– Aerobic plate count	5	3	$5x10^3$	10^5
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^3
	– *Clostridium perfringens*	5	1	10^2	10^4

14. Drinking Water

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Bottled drinking water: a) Non-carbonated (including flavoured)	Coliforms *E.coli* *Pseudomonas aeruginosa*	5 5 5	0 0 0	0 0 0	– – –
b) Carbonated waters	pH	5	0	3.5	–
		If any sample unit is greater than pH 3.5, proceed with the above sampling plans for non-carbonated waters			
Water for human consumption; at source, bottling operation	Coliforms	10	1	0	10/100 ml
	Fecal streptococci Sulphite-reducing clostridia	} Absent in 100 ml of sample			
Natural mineral water	**First Examination**	**Decision**			
	E.coli or Thermotolerant coliforms 1 x 250 ml	Must not be detectable in any sample			
	Total coliform bacteria 1 x 250 ml *Enterococcus fecalies* 1 x 250 ml	If ≥ 1 or ≤ 2, second examination is carried out			
	Pseudomonas aeruginosa 1 x 250 ml *Sulphite-reducing anaerobes* 1 x 250 ml	If > 2, rejected			
Second Examination*					
Natural mineral water	**Microorganisms**	**Limit per ml or gram**			
		n	c	m	M
	Total coliform bacteria Fecal streptococci Sulphite-reducing anaerobes *Pseudomonas aeruginosa*	4 4 4 4	1 1 1 1	0 0 0 0	2 2 2 2
Edible packaged ice	Aerobic plate count Coliforms (100 ml) *E. coli* (100 ml) *Pseudomonas aeruginosa* (250 ml)	5 5 5 5	1 0 0 0	$5x10^2$ 0 0 0	10^3 – – –

* If the count is > 2; re-sampling from the same point of source for second examination.

15. Beverages

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Carbonated beverages (non-alcoholic)	– Aerobic plate count	5	1	10^2	$3x10^2$
	– Yeasts and moulds	5	1	2	10
	– Coliforms	5	1	0	10
Un-pasteurized juices (fresh)	– Yeasts and moulds	5	2	10^3	10^4
	– *Escherichia coli*	5	2	10^2	10^3
	– *Salmonella*	5	0	0	–
Pasteurized fruit juice and drink (including concentrated)	– Aerobic plate count	5	2	$5x10^3$	10^4
	– Yeasts and moulds	5	2	10^2	10^3
	– Coliforms	5	3	5	10^2
Flavoured drink & its concentrates	– Aerobic plate count	5	1	10	10^2
	– Yeasts and moulds	5	0	0	–
Drink powder (dry)	– Aerobic plate count	5	2	10^3	10^4
	– Yeasts and moulds	5	1	10	10^2
	– Coliforms	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Staphylococcus aureus*	5	0	0	–
	– *Bacillus cereus*	5	1	10^2	–
Liquorice root extract; concentrates or drink	– Aerobic plate count	5	2	0	10^4
	– Enterobacteriaceae	5	2	10	10^2
	– Yeasts and moulds	5	2	0	10^2
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	0	0	–
Pasteurized soya drink	– Aerobic plate count	5	1	10^4	10^5
	– Coliforms	5	1	5	10
	– *Escherichia coli* O157	5	0	0	–
Sterilized soya drink	– Aerobic plate count	5	1	0	10
	– Coliforms	5	0	0	–
	– Yeasts and moulds	5	0	0	–
	– *Staphylococcus aureus*	5	0	0	–
Low calories beverages	– Aerobic plate count	5	2	10	10^2
	– Yeasts and moulds	5	1	0	2
	– Coliforms (100 ml)	5	1	0	1
	– *Escherichia coli*	5	0	0	–

16. Ready to Eat Foods

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Sandwiches and filled rolls with salad	– *Escherichia coli*	5	1	20	10^2
	– *Salmonella*	5	0	0	–
	– *Escherichia coli* O157	5	0	0	–
	– *Listeria monocytogenes**	5	1	20	10^2
	– *Bacillus cereus*	5	1	10^3	10^4
Sandwiches and filled rolls without salad	– Aerobic plate count **	5	1	10^6	10^7
	– Enterobacteriaceae	5	1	10^2	10^4
	– *Escherichia coli*	5	1	20	10^2
	– [1]*Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	20	10^2
	– *Bacillus cereus*	5	1	10^3	10^4
Coleslaw (cabbage)	– Aerobic plate count	5	1	10^5	10^6
	– *Escherichia coli*	5	2	10	10^2
	– *Escherichia coli* O157	5	0	0	–
	– *Listeria monocytogenes*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10^2	10^4
Sandwiches and filled rolls with cheese- Ready to eat meals (pasta/pizza, others)	– Enterobacteriaceae	5	1	10^2	10^4
	– *Escherichia coli*	5	1	20	10^2
	– [1]*Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	20	10^2
	– *Bacillus cereus*	5	1	10^3	10^4
Rice	– Aerobic plate count	5	1	10^5	10^6
	– Enterobacteriaceae	5	1	10^2	10^4
	– *Escherichia coli*	5	1	20	10^2
	– [2]*Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	20	10^2
	– *Bacillus cereus*	5	1	10^3	10^4
	– *Clostridium perfringens*	5	1	20	10^2
(1) Bhaji, Falafel	– Aerobic plate count	5	1	10^3	10^4
(2) Soup (all kinds), Samosa, Mashed potato, Desserts (tarts, flans, and sweet pies)	– Aerobic plate count	5	1	10^4	10^5
(3) Spring rolls- Trifle	– Aerobic plate count	5	1	10^5	10^6
(4) Homous, Tzatziki, and other dips.	– Aerobic plate count	5	1	10^6	10^7

[1] *Salmonella* is tested only when the sample is found to have any count of Enterobacteriaceae.
[2] In case if the rice contains meat or poultry.
* This limit applies to shelf-stable foods (kept at room temperature or deep freezer). If it is refrigerated or meant for infants the approach should be "not detected in 25 g".
** Optional.

Item	Microorganisms	Limit per ml or gram			
		N	c	m	M
Parameters given below apply to all the above products (1- 4):					
	– Enterobacteriaceae	5	1	10^2	10^4
	– *Escherichia coli*	5	1	20	10^2
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	20	10^2
	– *Bacillus cereus*	5	1	10^3	10^4
	– *Clostridium perfringens**	5	1	20	10^2
Jelly	– Aerobic plate count	5	2	10^2	10^3
	– Enterobacteriaceae	5	0	0	–
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	20	10^2
	– Sulphite-reducing anaerobes	5	1	0	10
	– *Clostridium perfringens**	5	0	0	–

* Optional.

17. Miscellaneous Foods

Item	Microorganisms	Limit per ml or gram			
		n	c	m	M
Tofu (not UHT)	– *Escherichia coli*	5	0	0	–
	– *Staphylococcus aureus*	5	2	10^2	10^3
	– *Bacillus cereus*	5	2	10^2	10^3
Sesame seed products (Tahini, Halwa)	– Moulds	5	1	10^2	10^3
	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^2
Cultured Seeds and Grains (bean sprouts, alfalfa, etc)	– *Escherichia coli*	5	0	0	–
	– *Salmonella*	5	0	0	–
Edible essential water (rose & flower water, others)	– Aerobic plate count	5	2	10	10^2
	– Yeasts	5	2	0	20
	– *Candida*	5	0	0	–
	– Coliforms	5	2	0	10
	– *Escherichia coli*	5	0	0	–
	– *Pseudomonas aeruginosa*	5	0	0	–
	– *Bacillus cereus*	5	0	0	–
Nutritious powder	– Aerobic plate count	5	2	10^3	10^4
	– Coliforms	5	1	0	10
	– *Salmonella*	15	0	0	–
	– *Staphylococcus aureus*	5	0	0	–
	– *Bacillus cereus*	5	1	10^2	–
Cream caramel powder	– Aerobic plate count	5	2	10^4	10^6
	– *Escherichia coli*	5	2	0	10
	– *Salmonella*	10	0	0	–
	– *Staphylococcus aureus*	5	1	10	10^3

- References:

1. Brockmann, S., Piechotowski, I., Kimmig, P. (2004). Salmonella in sesame seed products. *J Food Prot* 67 (1), p: 178-180.
2. Bull, A., Crerar, S., and Beers, M. (2002). Australia's Imported Food Program - a valuable source of information on microorganisms in foods. CDI 26(1), 28-32. (11, 30).
3. CAC/GL 50-2004 General guidelines on sampling.
4. Codex standard 292-2008. Standard for live and raw bivalve mollusks.
5. Commission regulation (EC) No 1441/2007 of 5 December 2007 amending Regulation (EC) No 2073/2005 on microbiological criteria for foodstuffs. Official J Eur. Union. (1, 25). (1, 36). (1, 19). (1, 21).
6. Food Administration Manual, S.11: Microbiological Reference Criteria for Food, Version 2 (1995), p: 25,16,15,14, 17, 21, 23, 18, 19, and 20.
7. Gilbert, RJ Louvois, J de Donovan, T & others (2000). Guidelines for the microbiological quality of some ready-to-eat foods sampled at the point of sale. Commun Dis Public Health, 3 (3): 163-7.
8. GSO 1017/98 Edible essential water rose water - flower water.
9. GSO 1320/2002 Soft candy.
10. GSO 1821/2007 General standard for fruit juices and nectars.
11. GSO 1822/2007 Cream caramel powder.
12. GSO 1968/2009 Concentrated cane syrup.
13. GSO 1969/2009 Liquorice root.
14. GSO 222/2005 Table olives.
15. GSO 263/1994 Hard candy.
16. Guidelines for assessing the microbiological safety of ready-to-eat foods placed on the market. London: Health protection agency, November 2009.
17. Hasell, S., Salter, M. (2003). Review of the microbiological standards for foods. *Food Control* 14, p: 391-398. Ref12, 395.
18. Health Products and Food Branch (HPFB) Standards and Guidelines for Microbiological Safety of Food- An Interpretive Summery- 2008. Canadian Food Inspection Agency (CFIC).
19. International Commission on Microbiological Specification for Foods (ICMSF). Microorganisms in foods-2. Sampling for microbiological analysis: principles & specific applications (1986) 2nd ed.

20. Isolation and Enumeration of *Cronobacter sakazakii* from dehydrated powdered infant formula, FDA US, 2002.
21. Standard 1.6.1 – Microbiological Limits for Food. Volume 2 of the Food Standards Code, the Australia New Zealand Food Standards Code (ANZFA), 2001.
22. Tomato products - specification, part-3: Sauce and ketchup, 2005. Kenya Bureau of Standards (KEBS).
23. Varga, L. (2007). Microbiological quality of commercial dairy products. *Communicating Current Research and Educational Topics and Trends in Applied Microbiology A. Méndez-Vilas (Ed.)*, p: 487-494.
24. www.ams.usda.gov/standards/peanutbu.pdf.
25. دين أو.كلايفر، ترجمة أ.د. مسفر الدقل، د. اسماعيل الشايب (2010). الأمراض المنقولة بواسطة الغذاء.

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية
GCC STANDARDIZATION ORGANIZATION (GSO)

مشروع تحديث لائحة أولي
First Draft of Standard DS

إعداد اللجنة الفرعية الخليجية رقم TC05-2

Prepared by GSO Technical Sub-Committee No. TC05-2

تحديث
GSO 2481 / 2019

الحدود القصوى المسموح بها من بقايا الادوية البيطرية في الاغذية
Maximum Residues Limits (Mrls) of Veterinary Drugs In Food

I.C.S: 67.040.00

تقديم

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية هيئة إقليمية تضم في عضويتها أجهزة التقييس الوطنية في الدول الأعضاء ، ومن مهام الهيئة إعداد المواصفات القياسية واللوائح الفنية الخليجية بواسطة لجان فنية متخصصة.

قرر (المجلس الفني لـ/مجلس إدارة) هيئة التقييس لدول مجلس التعاون لدول الخليج العربية في اجتماعه رقم () الذي عقد بتاريخ / / هـ ،الموافق / / م اعتماد تحديث (اللائحة الفنية) الخليجية **(GSO 2481 الحدود القصوى المسموح بها من بقايا الادوية البيطرية في الاغذية)** باللغة (العربية/الإنجليزية) التي تم دراستها وإعدادها ضمن برنامج عمل (اللجنة الفنية) الخليجية رقم "TC05-2" اللجنة الفنية الفرعية الخليجية لمواصفات المواد المضافة وملوثات الأغذية" المدرجة في خطة (المملكة العربية السعودية).

على أن تلغي المواصفة القياسية/اللائحة الفنية الخليجية رقم (/) وَتحل محلها.

الحدود القصوى المسموح بها من بقايا الادوية البيطرية في الاغذية

1 المجال :

تختص هذه المواصفة القياسية الخليجية بالحدود القصوى المسموح بها لمتبقيات الأدوية البيطرية في المنتجات الغذائية والغذاء من أصل حيواني.

2 المراجع التكميلية

1.2 GSO 592 " طرق أخذ عينات اللحوم ومنتجاتها " .

2.2 GSO 2475 " طرق أخذ العينات لتقدير بقايا الأدوية البيطرية في الأغذية –الجزء الأول: منتجات اللحوم والدواجن " .

3.2 المواصفة القياسية الخليجية التي تعتمدها الهيئة والخاصة بـــ " طرق تقدير بقايا العقاقير البيطرية في اللحوم ومنتجات اللحوم" .

3 التعاريف

1.3 الدواء البيطري : هو أي مادة توصف أو تطبق أو تعطى لأي حيوان منتج للغذاء مثل الحيوانات المنتجة للحوم أو الحليب, الدواجن, الأسماك سواء كان استخدامها لأغراض علاجية وقائية أو تشخيصية أو كمحفزات للنمو .

2.3 متبقيات الأدوية البيطرية : وهي المواد التي تتواجد في المنتجات الغذائية من أصل حيواني كنتيجة لاستخدام الأدوية البيطرية. وهذه تعتمد على المركبات الأصلية و/أو نواتج أيضها داخل الجسم وكذلك بقايا الأدوية البيطرية غير النقية.

3.3 الحدود القصوى للمتبقيات : هو الحد الأقصى المسموح لمتبقي دواء بيطري ناتج من رعاية حيوانية وبيطرية جيدة وموصى به من هيئة الدستور الغذاء والهيئات الدولية الأخرى وذلك ليكون حد قانوني مسموح به في الغذاء أو مضافاً إليه. يعبر عن هذه الحدود كتركيزات تقاس بالمايكرو جرام من البقايا للكيلو غرام من المادة الغذائية (مكجم/كجم) (µg/kg) .

4.3 المعدل المسموح تناوله يومياً : هو الكمية المتبقية من الدواء البيطري ، التي تحسب على أساس وزن الجسم، والتي يمكن تناولها يوميا على مدى عمر الإنسان دون أي مخاطر صحية معتبرة (متوسط وزن الإنسان 60 كجم).

4- المتطلبات :

يجب أن لا تتعدى بقايا الأدوية البيطرية في الأغذية ذات الأصل الحيواني حدود معينة والتي تم توصيف كل منها في الجداول التالية :

5- قائمة الأدوية البيطرية :

No.	Drug	Page	No.	Drug	Page
1	Abamectin	49	78	Mebendazol	55
2	Albendazole	50	79	Melengestrol acetate	72
~~3~~	~~Amitraz~~	~~62~~	80	Meloxicam	70
4	Amoxicillin	14	81	Methyl benzoquate	46
5	Ampicillin	15	82	Monensin	46
6	Amprolium	42	83	Monepantel	55
7	Apramycin	9	84	Moxidectin	56
8	Arsanilic acid	73	85	Narasin	47
9	Atropine sulfate	77	86	Natamycin	42
10	Avermectin	51	87	Neomycin	11
11	Avilamycin	27	88	Nicarbazin	47
12	Bacitracin	28	89	Nitobimin	57
13	Benzyl penicillin	15	90	Nitroxynil	57
14	Bromhexine	76	91	Novobiocin	7
15	Carprofen	69	92	Nystatin	42
16	Cefalonium	13	93	Oleandomycin	24
17	Cefapirin	13	94	Ormetoprim	48
18	Ceftiofur	13	95	~~Oxfendazole~~	58
19	Cefuroxime	14	96	Oxyclozanide	59
20	Chlortetracycline	39	97	Oxytetracycline	40
21	Clazuril	43	98	Oxytocin	72
22	Clenbuterol	73	99	Permethrin	68

23	Clopidol	43	100	Phoxim	68
24	Cloprostenol	72	101	Piperazine	59
25	Closantel	52	102	Pirlimicin	23
26	Cloxacillin	16	103	Poloxalene	77
27	Colistin	28	104	Polymixin B	29
28	Cyhalothrin	63	105	Praziquantel	59
29	Cyfluthrin	64	106	Prednisolone	71
30	Cypermethrin And Alpha -Cypermethrin	65	107	Procaine benzyl penicillin	17
31	~~Cyromazine~~	66	108	Procaine HCl	75
32	Danofloxacin	19	109	Progesterone	73
33	Decoquinate	43	110	Ractopamine	74
34	Deltamethrin	66	111	Rafoxanide	59
35	Derquantel	52	112	Robenidine hydrochloride	48
36	Dexamethasone	71	113	Roxarsone	74
37	Diazinon	67	114	Salinomycin Sodium	48
38	Diclazuril	44	115	Sarafloxacin	22
39	Diclofenac	70	116	Semduramycin	48
~~40~~	~~Dicyclanil~~	67	117	Spectinomycin	8
41	Difloxacin	20	118	Spiramycin	25
42	Dihydrostreptomycin	9	119	Streptomycin	12
43	Diminazene	61	120	~~Sulfabenzamide~~	30
44	Dinitolmide (Zoalene)	44	121	~~Sulfacetamide~~	30
45	Doramectin	52	122	~~Sulfachlorpyridazine~~	31
46	Doxapram HCl	75	123	~~Sulfadiazine~~	31
47	Doxycycline	39	124	~~Sulfadimethoxine~~	32
48	Emamectin Benzoate	68	125	Sulfadimidine	32
49	Enrofloxacin	20	126	~~Sulfadoxine~~	33
50	Epinephrine	76	127	~~Sulfaethoxypyridazine~~	34
51	Eprinomectin	53	128	~~Sulfaguanidine~~	34
52	Erythromycin	23	129	~~Sulfamerazine~~	35
53	Estradiol-17 8beta	72	130	~~Sulfanilamide~~	36
54	Etamiphylline camsilate	76	131	~~Sulfanitran~~	36

55	~~Ethopabate~~	44	132	~~Sulfapyridine~~	37
56	Febantel/Fenbendazole/ Oxfendazole	53	133	~~Sulfaquinoxaline~~	37
57	~~Fenbendazole~~	53	134	~~Sulfathiazole~~	38
58	Florfenicol	18	135	Teflubenzuron	69
59	Fluazuron	68	136	Testosterone	73
60	Flubendazole	54	137	Tetracycline	41
61	Flumequine	21	138	Thiabendazole	60
62	Flunixin meglumine	70	139	Thiamphenicol	18
63	Gentamicin	10	140	Tiamulin	27
64	Gonadotrophin	72	141	Tilmicosin	25
65	Halofuginone hydrobromide	45	142	Tolfenamic acid	71
66	Hydrochlorothiazide	77	143	Toltrazuril	48
67	~~Hydrocortisone~~	71	144	Trenbolone acetate	74
68	Imidocarb	61	145	Tricaine methanesulfonate	75
69	Isometamidium	62	146	Trichlorfon (metrifonate)	69
70	Ivermectin	54	147	Triclabendazole	60
71	Ketamine	75	148	Trimethoprim	18
72	Ketoprofen	70	149	Tulathromycin	26
73	Lasalocid Sodium	45	150	Tylosin	26
74	Levamisole	54	151	Virginiamycin	29
75	Lincomycin	22	152	Zeranol	74
76	Maduramicin Ammonium	46	153	Zilpaterol	74
77	Marbofloxacin	22			

6- الحدود القصوى المسموح بها من بقايا الأدوية البيطرية في الأغذية :

Abamectin (Anthelmintic agent مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-2 µg/kg body weight		
Residue Definition		Avermectin B1a		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Liver	100	CAC 26 (2003)	
	Kidney	50		
	Fat	100		

Albendazole (Anthelmintic agent مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-50 µg/kg body weight		
Residue Definition		Exp milk, 2-aminosulfone metabolite: milk not yet identified		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Not specified	Muscle	100	CAC 20 (1993)	
	Liver	5000		
	Kidney	5000		
	Fat	100		
	Milk (µg/l)	100		

Amoxicillin (Antimicrobial agent مضاد الميكروبات)				
Microbiologicale Acceptable Daily Intake (ADI)		0-0.002 mg/kg body weight based on the effects of Amoxicillin on the intestinal microbiota		
Acute Reference Dose		0.005 mg/kg bw based on microbiological effects on the intestinal microbiota		
Estimated Chronic Dietary Exposure		0.14 µg/kg bw per day (for the general population), which represents 7% of the upper bound of the mADI		
Estimated Acute Dietary Exposure		1.4 µg/kg bw (for the general population), which represents 28% of the microbiological ARfD 1.6 µg/kg bw (for children), which represents 31% of the microbiological ARfD		
Residue Definition		Amoxicillin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	50	CAC 35 (2012)	
	Liver	50		
	Kidney	50		
	Fat	50		
	Milk	4		
Sheep	Muscle	50		
	Liver	50		
	Kidney	50		
	Fat	50		
	Milk	4		
Finish	Fillet	50	CAC 41 (2018)	The term “finfish”includes all fish species. Muscle plus skin in natural proportion
	Muscle	50		The term “finfish”includes all fish species.

Ampicillin (Antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		100 ug/kg body weight		
Acute Reference Dose		0.012 mg/kg bw based on the microbiological end-point.		
Estimated Chronic Dietary Exposure		0.29 µg/kg bw per day (for the general population), which represents 10% of the upper bound of the ADI.		
Estimated Acute Dietary Exposure		1.9 µg/kg bw per day (for the general population), which represents 16% of the ARfD. 1.7 µg/kg bw per day (for children), which represents 14% of the ARfD.		
Residue Definition		Ampicillin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Finish	Fillet	50	CAC 41 (2018)	The term "finfish"includes all fish species. Muscle plus skin in natural proportion
	Muscle	50		The term "finfish"includes all fish species.

Amprolium (Anticoccidial drugs مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		100 ug/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	500	Canadian MRL, 2011	
	Liver	500		
	Kidney	500		
	Fat	2000		
Chicken	Muscle	200	EMEA/MRL/767/00-FINAL (2001)	
	Liver	200		
	Kidney	400		

	Skin/fat	200		
	Eggs	1000		
Turkey	Muscle	200	EMEA/MRL/767/00-FINAL (2001)	
	Liver	200		
	Kidney	400		
	Skin/fat	200		

Apramycin (Aminoglycosides Antibiotics مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0–30 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	50	Australian standard MRL, 2012	
	Liver	2000		
	Kidney	20000		
	Fat	2000		
Sheep	Muscle	50	Australian standard MRL, 2012	
	Liver	2000		
	Kidney	2000		
	Fat	2000		
Goat	Muscle	50	Australian standard MRL, 2012	

	Liver	2000		
	Kidney	2000		
	Fat	2000		
Camel	Muscle	50	Australian standard MRL, 2012	
	Liver	2000		
	Kidney	2000		
	Fat	2000		
Chicken	Muscle	50	Australian standard MRL, 2012	
	Liver	1000		
	Kidney	1000		
	Fat	1000		
Turkey	Muscle	50	Australian standard MRL, 2012	
	Liver	1000		
	Kidney	1000		
	Fat	1000		

Arsanilic acid (Growth Promoting Agents محفزات النمو)				
Acceptable Daily Intake (ADI)		not established		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	500	Canadian MRL, 2011	

	Liver	2000		
	Eggs	500		
Turkey	Muscle	500	Canadian MRL(2011)	
	Liver	2000		

Atropine sulfate (Digestive System Drugs أدوية الجهاز الهضمي)				
Acceptable Daily Intake (ADI)		0-0.0002 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
All food producing species	Not applicable	No MRL required	Commission Regulation (Eu) No 37/2010	

Avermectin (Aminoglycosides Antibiotics مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0 -2 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	5	Australian standard MRL, 2012	
	Liver	100	CAC/MRL 2-2011	
	Kidney	50		
	Fat	100		
	Milk (µg/l)	20	Australian standard MRL, 2012	
Sheep	Muscle	20	EMEA/MRL/865/03-FINAL June 2004	
	Liver	50	Australian standard MRL,	

	Kidney	50	2012	
	Fat	50		
Goat	Muscle	10	Australian standard MRL, 2012	
	Liver	50		
	Kidney	10		
	Fat	100		
	Milk	5		

Avilamycin (Antimicrobial Drugs مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0-50 µg/kg body weight		
Residue Definition		Exp milk, 2-aminosulfone metabolite: milk not yet identified		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	100	CAC 32 (2009)	
	Liver	5000		
	Kidney	5000		
	Fat	100		
Turkey	Muscle	200	CAC 32 (2009)	
	Liver	300		
	Kidney	200		
	Fat/skin	200		

Rabbits	Muscle	200	CAC 32 (2009)	
	Liver	300		
	Kidney	200		
	Fat/skin	200		

Bacitracin (Antimicrobial Drugs مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-1 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Camel	Milk(µg/l)	500	Australian standard MRL, 2012 Canadian MRL, 2011	
Chicken	Muscle	500		
	Liver	500		
	Kidney	500		
	Fat	500		
	Eggs	500		
Turkey	Muscle	500	Canadian MRL, 2011	
	Liver	500		
	Kidney	500		
	Fat	500		

Benzyl penicillin (Antimicrobial Agent مضاد البكتريا)				
Acceptable Daily Intake (ADI)		30 µg penicillin/person/day		
Residue Definition		Benzylpenicillin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Catle	Muscle	50	CAC 23 (1999)	
	Liver	50		
	Kidney	50		
	Milk µg/l	4		
Chicken	Muscle	50	CAC 32 (2009)	Applies to procaine benzylpenicillin only.
	Liver	50		Applies to procaine benzylpenicillin only.
	Kidney	50		Applies to procaine benzylpenicillin only.

Bromhexine (RESPIRATORY SYSTEM DRUGS أدوية الجهاز التنفسي)				
Acceptable Daily Intake (ADI)		0.3 mg/kg per person		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Not applicable	No MRL required	Commission regulation (EU) No 37/2010	
Poultry	Not applicable	No MRL required		

Carprofen (Anti-Inflammatories مضادات الالتهابات الغير ستيرودية)				
Acceptable Daily Intake (ADI)		8.6 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	500	Commission regulation (EU) No 37/2010 Emea/mrl/042/95	
	Liver	1000		
	Kidney	1000		
	Fat	1000		

Cefalonium (Antimicrobial Agent مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0 - 20 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Australian standard MRL, 2012	
	Liver	100		
	Kidney	100		
	Fat	100		
	Milk (µg/l)	20		

Cefapirin (Antimicrobial Agent مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0 - 0.02 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	20	Australian standard MRL, 2012	
	Liver	20		

	Kidney	20		
	Fat	20		
	Milk (µg/l)	10		

Ceftiofur (Antimicrobial Agent مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0 - 50 µg/kg body weight		
Residue Definition		Desfuroylceftiofur		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	1000	CAC 23 (1999)	
	Liver	2000		
	Kidney	6000		
	Fat	2000		
	Milk (µg/l)	100		

Cefuroxime (Antimicrobial Agent مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0 - 30 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Australian standard MRL, 2012	
	Liver	100		
	Kidney	100		
	Fat	100		

	Milk (µg/l)	100		

Chlortetracycline/Oxytetracycline/Tetracycline (Antimicrobial Drugs مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0-30 µg/kg body weight		
Residue Definition		Parent drugs, singly or in combination		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	200	CAC 26 (2003)	
	Liver	600		
	Kidney	1200		
	Milk (µg/l)	100		
Sheep	Muscle	200	CAC 26 (2003)	
	Liver	600		
	Kidney	1200		
	Milk (µg/l)	100		
Poultry	Muscle	200	CAC 26 (2003)	
	Liver	600		
	Kidney	1200		
	Eggs	400		
Fish	Muscle	200	CAC 26 (2003)	Applies only to oxytetracycline
Giant prawn (Paeneus monodon)	Muscle	200	CAC 26 (2003)	Applies only to oxytetracycline

Clazuril (Growth Promoting Agent محفز النمو)				
Acceptable Daily Intake (ADI)		0.05 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Pigeon	No MRL required	Not applicable	Commission Regulation (Eu) No 37/2010	

Clenbuterol (adrenoceptor agonist مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0-0.004 µg/kg body weight		
Residue Definition		Clenbuterol		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	0.2	CAC 26 (2003)	Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunt therapy in respiratory diseases
	Liver	0.6		
	Kidney	0.6		
	Fat	0.2		
	Milk (µg/l)	0.05		
Horse	Muscle	0.2	CAC 26 (2003)	Due to the potential abuse of this drug, the MRLs are recommended only when associated with a nationally approved therapeutic use, such as tocolysis or as an adjunt therapy in respiratory diseases
	Liver	0.6		
	Kidney	0.6		
	Fat	0.2		

Clopidol (Antiparasitic Drugs مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0.0025 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**

Chicken	Muscle	5000	Canadian MRL, 2011	
	Liver	15000		
	Kidney	15000		
Turkey	Muscle	5000	Canadian MRL, 2011	
	Liver	15000		
	Kidney	15000		

Cloprostenol (Hormones الهرمونات)				
Acceptable Daily Intake (ADI)		0.075 µg/kg per person		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Edible tissues	No need to establish	Annex 11of Council regulation (EEC)No 2377/90	

Closantel (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-30 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	1000	CAC 20 (1993)	
	Liver	1000		
	Kidney	3000		
	Fat	3000		
Sheep	Muscle	1500	CAC 20 (1993)	
	Liver	1500		

	Kidney	5000		
Sheep	Fat	2000	CAC 20 (1993)	

Cloxacillin (Antimicrobial agents مضاد البكتريا)				
Acceptable Daily Intake (ADI)		200 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	10	Canadian MRL, 2011	
	Liver	10		
	Kidney	10		
	Fat	10		
	Milk (µg/l)	10	Australian standard MRL, 2012	

Colistin (Antimicrobial Drugs مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0-7 µg/kg body weight		
Residue Definition		Sum of colistin A and colistin B		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	150	CAC 31 (2008)	
	Liver	150		
	Kidney	200		
	Fat	150		
	Milk (µg/l)	50		

Sheep	Muscle	150	CAC 31 (2008)	
	Liver	150		
	Kidney	200		
	Fat	150		
	Milk (µg/l)	50		
Goat	Muscle	150	CAC 31 (2008)	
	Liver	150		
	Kidney	200		
	Fat	150		
Chicken	Muscle	150	CAC 31 (2008)	
	Liver	150		
	Kidney	200		
	Fat	150		The MRL includes skin + fat
	Eggs	300		
Tukey	Muscle	150	CAC 31 (2008)	
	Liver	150		
	Kidney	200		
	Fat	150		The MRL includes skin + fat
Rabbit	Muscle	150	CAC 31 (2008)	

	Liver	150		
	Kidney	200		
	Fat	150		

Cyfluthrin (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0-20 µg/kg body weight		
Residue Definition		Cyfluthrin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	20	CAC 26 (2003)	
	Liver	20		
	Kidney	20		
	Fat	200		
	Milk (µg/l)	40		

Cyhalothrin (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0-5 µg/kg body weight		
Residue Definition		Cyhalothrin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	20	CAC 28 (2005)	
	Liver	20		
	Kidney	20		
	Fat	400		

	Milk (µg/l)	30		
Sheep	Muscle	20	CAC 28 (2005)	
	Liver	50		
	Kidney	20		
	Fat	400		

Cypermethrin And Alpha-Cypermethrin (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0-20 µg/kg body weight for both Cypermethrin And Alpha-Cypermethrin		
Residue Definition		Total of cypermethrin residues resulting from the use of cypermethrin or alpha-cypermethrin as veterinary drugs		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	50	CAC 29 (2008)	
	Liver	50		
	Kidney	50		
	Fat	1000		
	Milk (µg/l)	100		
Sheep	Muscle	50	CAC 29 (2008)	
	Liver	50		
	Kidney	50		
	Fat	1000		

Danofloxacin (Antimicrobial Drugs مضاد البكتريا)				
Acceptable Daily Intake (ADI)		0-20 µg/kg body weight		
Residue Definition		Danofloxacin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	200	CAC 24 (2001)	
	Liver	400		
	Kidney	400		
	Fat	100		
Shicken	Muscle	200	CAC 24 (2001)	
	Liver	400		
	Kidney	400		
	Fat	100		Fat/skin in normal proportion

Decoquinate (Antiparasitic Drugs مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0-7 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	1000	Canadian MRL, 2011	
	Liver	2000		
	Kidney	2000		
	Fat	2000		
Goat	Muscle	1000	Canadian MRL, 2011	
	Liver	2000		

	Kidney	2000		
	Fat	2000		
Chicken	Muscle	1000	Canadian MRL, 2011	
	Liver	2000		
	Kidney	2000		
	Fat	2000		

Deltamethrin (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0-10 µg/kg body weight		
Residue Definition		Deltamethrin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	30	CAC 26 (2003)	
	Liver	50		
	Kidney	50		
	Fat	500		
	Milk (µg/l)	30		
Chicken	Muscle	30	CAC 26 (2003)	
	Liver	50		
	Kidney	50		
	Fat	500		
	Eggs	30		

Salmon	Muscle	30	CAC 26 (2003)	
Sheep	Muscle	30	CAC 26 (2003)	
	Liver	50		
	Kidney	50		
	Fat	500		

Derquantel (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-0.3 µg/kg body weight		
Residue Definition		Derquantel		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Sheep	Muscle	0.3	CAC 38 (2015)	
	Liver	0.8		
	Kidney	0.4		
	Fat	7		

Dexamethasone (glucocorticosteroid مضادات الالتهابات الستيرودية)				
Acceptable Daily Intake (ADI)		0-0.015 µg/kg body weight		
Residue Definition		Dexamethasone		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	1	CAC 32 (2009)	
	Liver	2		
	Kidney	1		
	Milk (µg/l)	0.3		

Horses	Muscle	1	CAC 32 (2009)	
	Liver	2		
	Kidney	1		

Diazinon (**Ectoparasiticides** مضادات الطفيليات الخارجية)				
Acceptable Daily Intake (ADI)		0–0.002 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	20	Commission regulation (EU) No 37/2010	
	Liver	20		
	Kidney	20		
	Fat	700		
	Milk (µg/l)	20		

Diclazuril (antiprotozoal agent مضادات الطفيليات)				
Acceptable Daily Intake (ADI)		0-0.30 µg/kg body weight		
Residue Definition		Diclazuril		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
poultry	Muscle	500	CAC 23 (1999)	
	Liver	3000		
	Kidney	2000		
	Fat/skin	1000		

Rabbit	Muscle	500	CAC 23 (1999)	
	Liver	3000		
	Kidney	2000		
	Fat	1000		
Sheep	Muscle	500	CAC 23 (1999)	
	Liver	3000		
	Kidney	2000		
	Fat	1000		

Diclofenac (Anti-Inflammatories non Steroidal مضادات الالتهابات غير الستيرودية)				
Acceptable Daily Intake (ADI)		0.5 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	5	Commission regulation (EU) No 37/2010	
	Liver	5		
	Kidney	10		
	Fat	1		
	Milk (µg/l)	0.1		

Difloxacin (Antimicrobial Drugs مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		10 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	500	Commission Regulation (Eu) No 37/2010	
	Liver	3000		
	Kidney	2000		
	Fat	1000		
Sheep	Muscle	400	Commission Regulation (Eu) No 37/2010	
	Liver	1400		
	Kidney	800		
	Fat	100		
Goat	Muscle	400	Commission Regulation (Eu) No 37/2010	
	Liver	1400		
	Kidney	800		
	Fat	100		
Poultry	Muscle	300	Commission Regulation (Eu) No 37/2010	
	Liver	1900		
	Kidney	600		
	Fat/skin	400		

Dihydrostreptomycin/ streptomycin (Antimicrobial Drugs مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-50 µg/kg body weight		
Residue Definition		Sum of dihydrostreptomycin and streptomycin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	600	CAC 24 (2001)	
	Liver	600		
	Kidney	1000		
	Fat	600		
	Milk (µg/l)	200	CAC 26 (2003)	
Chicken	Muscle	600	CAC 24 (2001)	
	Liver	600		
	Kidney	1000		
	Fat	600		
Sheep	Muscle	600	CAC 24 (2001)	
	Liver	600		
	Kidney	1000		
	Fat	600		
	Milk (µg/l)	200	CAC 26 (2003)	

Diminazene (trypanocide مضادات الطفيليات)				
Acceptable Daily Intake (ADI)		0-100 µg/kg body weight		
Residue Definition		Diminazene		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	500	CAC 22 (1997)	
	Liver	12000		
	Kidney	60000		
	Milk (µg/l)	150		LOQ of the analytical method

Dinitolmide (Zoalene) (Anticoccidial drugs مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	3000	Australian standard MRL, 2012 Canadian MRL, 2011	
	Liver	6000		
	Kidney	6000		
	Fat/skin	2000		
Turkey	Muscle	3000	Canadian MRL, 2011	
	Liver	3000		
	Kidney	6000		
	Fat	3000		

Doramectin (Anthelmintic agents مضادات الديدان)				
Acceptable Daily Intake (ADI)		0-1 µg/kg body weight		
Residue Definition		Doramectin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	10	CAC 22 (1997)	High concentration of residues at the injection site over a 35 day period after subcutaneous or intramuscular administration of the drug at the recommended dose
	Liver	100		
	Kidney	30		
	Fat	150		High concentration of residues at the injection site over a 35 day period after subcutaneous or intramuscular administration of the drug at the recommended dose
	Milk (µg/l)	15	CAC 29 (2006)	Depending on the route and/or time of administration the use of doramectin in dairy cows may result in extended withdrawal periods in milk. This may be addressed in national/regional regulatory programmes.

Doxapram HCl (Nervous System Drugs أدوية الجهاز العصبي)				
Acceptable Daily Intake (ADI)		not established		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**

All mammalian food producing species	Not applicable	No MRL required	Commission Regulation (Eu) No 37/2010	

Doxycycline (Antimicrobial Drugs مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-3 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Commission regulation (EU) No 37/2010	
	Liver	300		
	Kidney	600		
Poultry	Muscle	100	Commission regulation (EU) No 37/2010	
	Liver	300		
	Kidney	600		
	Fat/skin	300		

Emamectin Benzoate (antiparasitic agent مضاد الطفيليات)	
Acceptable Daily Intake (ADI)	ADI of 0–0.5 µg/kg bw established by JMPR (2011), based on an overall NOAEL of 0.25 mg/kg bw per day for neurotoxicity from 14- and 53-week studies in dogs, supported by an overall NOAEL of 0.25 mg/kg bw per day from 1- and 2-year studies in rats. An uncertainty factor of 500 was applied to the NOAEL, which includes an additional uncertainty factor of 5 to account for the steep dose–response curve and irreversible histopathological effects in neural tissues at the lowest-observed-adverse-effect level (LOAEL) in dogs, as used by JMPR and confirmed by JECFA78.
Estimated Dietary Exposure	11 µg/person per day, which represents approximately 37% of the upper bound of the ADI (JECFA78)
Residue Definition	**Emamectin B1a**

Species	Tissue	MRL (µg/kg)	Referance	Notes
Salmon	Muscle	100	CAC 38 (2015)	
	Fillet	100		Muscle plus skin in natural proportion
Trout	Muscle	100	CAC 38 (2015)	
	Fillet	100		Muscle plus skin in natural proportion

Enrofloxacin (Antimicrobial Drugs مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		2 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Commission Regulation (Eu) No 37/2010	
	Liver	300		
	Kidney	200		
	Fat	100		
	Milk (µg/l)	100		
Goat	Muscle	100	Commission Regulation (Eu) No 37/2010	
	Liver	300		
	Kidney	200		
	Fat	100		
	Milk (µg/l)	100		
Poultry	Muscle	100	Commission Regulation (Eu) No 37/2010	
	Liver	200		
	Kidney	300		

	Fat/skin	100		
Rabbit	Muscle	100	Commission Regulation (Eu) No 37/2010	
	Liver	200		
	Kidney	300		
	Fat	100		

Epinephrine (Cardiovascular System Drugs أدوية جهاز الأوعية القلبية)				
Acceptable Daily Intake (ADI)		0.3 mg per person		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
All food producing species	Not applicable	No MRL required	Commission Regulation (Eu) No 37/2010	

Eprinomectin (anthelmintic agent مضادات الديدان)				
Acceptable Daily Intake (ADI)		0-10 µg/kg body weight		
Residue Definition		Eprinomectin B1a		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	CAC 26 (2003)	
	Liver	2000		
	Kidney	300		
	Fat	250		
	Milk (µg/l)	20		

ERYTHROMYCIN (Antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-0.7 µg/kg body weight		
Residue Definition		Erythromycin A		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	100	CAC 31 (2008)	
	Liver	100		
	Kidney	100		
	Fat	100		The MRL includes skin + fat
	Eggs	50		
Turkey	Muscle	100	CAC 31 (2008)	
	Liver	100		
	Kidney	100		
	Fat	100		The MRL includes skin + fat

ESTRADIOL-17BETA (production aid مساعد انتاج)				
Acceptable Daily Intake (ADI)		unnecessary (JECFA32); 0-0.05 µg/kg weight (JECFA52)		
Residue Definition		Estradiol-17beta.		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	unnecessary	CAC 21 (1995)	
	Liver	unnecessary		
	Kidney	unnecessary		
	Fat	unnecessary		

Etamiphylline camsilat (Respiratory System Drugs أدوية الجهاز التنفسي)				
Acceptable Daily Intake (ADI)		not established		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
All food producing species	Not applicable	No MRL required	Commission Regulation (Eu) No 37/2010	

FEBANTEL/FENBENDAZOLE/OXFENDAZOLE (anthelmintic agent مضاد الديدان)				
Acceptable Daily Intake (ADI)		Group ADI of 0-7 µg/kg body weight		
Residue Definition		Sum of fenbendazole, oxfendazole and oxfendazole sulphone, expressed as oxfendazole sulphone equivalents		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	CAC 23 (1999)	
	Liver	500		
	Kidney	100		
	Fat	100		
	Milk (µg/l)	100		
Goat	Muscle	100	CAC 23 (1999)	
	Liver	500		
	Kidney	100		
	Fat	100		
Horse	Muscle	100	CAC 23 (1999)	
	Liver	500		

	Kidney	100		
	Fat	100		
Sheep	Muscle	100	CAC 23 (1999)	
	Liver	500		
	Kidney	100		
	Fat	100		
	Milk (µg/l)	100		

Florfenicol (Antimicrobial Drugs مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-1 µg/kg body weight		
Residue Definition		Erythromycin A		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	200	Canadian MRL (2011)	
	Liver	2000		
	Kidney	500	Australian standard MRL, 2012	
Fish	Muscle	500	Australian standard MRL, 2012	

FLUAZURON (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0-40 µg/kg body weight		
Residue Definition		Fluazuron		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	200	CAC 23 (1999)	
	Liver	500		
	Kidney	500		
	Fat	7000		

FLUBENDAZOLE (anthelmintic agent مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-12 µg/kg body weight		
Residue Definition		Flubendazole		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Poultry	Muscle	200	CAC 21 (1995)	
	Liver	500		
	Eggs	400		

FLUMEQUINE (Antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-30 µg/kg body weight		
Residue Definition		Flumequine		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	500	CAC 28 (2005)	
	Liver	500		
	Kidney	3000		
	Fat	1000		

Chicken	Muscle	500	CAC 28 (2005)	
	Liver	500		
	Kidney	3000		
	Fat	1000		
Sheep	Muscle	500	CAC 28 (2005)	
	Liver	500		
	Kidney	3000		
	Fat	1000		
Trout	Muscle	500	CAC 28 (2005)	Muscle including normal proportion of skin

Flunixin meglumine (Anti-Inflammatories non Steroidal مضادات الالتهابات غير الستيرودية)				
Acceptable Daily Intake (ADI)		0-6 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	20	Australian standard MRL, 2012, Canadian MRL(2011)	
	Liver	20	Australian standard MRL, 2012	
	Kidney	20		
	Fat	30	Commission Regulation (EU) No 37/2010	
	Milk (µg/l)	6	Canadian MRL(2011)	

GENTAMICIN (Antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-20 µg/kg body weight		
Residue Definition		Gentamicin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	CAC 24 (2001)	
	Liver	2000		
	Kidney	5000		
	Fat	100		
	Milk (µg/l)	200		

GONADOTROPHIN (Hormones الهرمونات)				
Acceptable Daily Intake (ADI)		42.25 I.U. /kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
All food producing species	Not applicable	No MRL required	Commission Regulation (Eu) No 37/2010	

HALOFUGINONE HYDROBROMIDE (antiparasitic agent مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0.0003 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	10	Australian standard MRL, 2012 Canadian MRL(2011)	
	Liver	30		
	Kidney	30		
	Fat	25		
Chicken	liver	100	Australian standard MRL, 2012 Canadian MRL(2011	)

HYDROCHLOROTHIAZIDE (Urinary System Drugs أدوية الجهاز البولي)				
Acceptable Daily Intake (ADI)		12.5 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Not applicable	No MRL required	Commission Regulation (Eu) No 37/2010	

IMIDOCARB (antiprotozoal agent مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0-10 µg/kg body weight		
Residue Definition		Flumequine		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	300	CAC 28 (2005)	
	Liver	1500		
	Kidney	2000		
	Fat	50		
	Milk (µg/l)	50		

ISOMETAMIDIUM (Trypanocide مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0-100 µg/kg body weight		
Residue Definition		Flumequine		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	CAC 21 (1995)	
	Liver	500		
	Kidney	1000		
	Fat	100		

	Milk (µg/l)	100		

IVERMECTIN (anthelmintic agent مضاد الديدان)				
Acceptable Daily Intake (ADI)	0-10 µg/kg bw on the basis of a NOAEL of 0.5 mg/kg bw per day for neurological effects (mydriasis) and retardation of weight gain in a 14-week dog study, with application of an uncertainty factor of 50 (5 for interspecies differences based on pharmacokinetic studies in dogs and humans and 10 for intraspecies differences). The previous ADI of 0-1 µg/kg bw was withdrawn. (JECFA81)			
Estimated Chronic Dietary Exposure	The estimated daily intake (EDI) is 38 µg/person per day, based on a 60 kg individual, which represents 6% of the upper bound of the ADI. The GECDE for the general population is 0.9 µg/kg bw per day, which represents 9% of the upper bound of the ADI. The GECDE for children is 1.5 µg/kg body weight per day, which represents 15% of the upper bound of the ADI. The GECDE for infants is 1.3 µg/kg bw per day, which represents 13% of the upper bound of the ADI. (JECFA81)			
Acute Reference Dose	0.2 mg/kg bw, based on a NOAEL of 1.5 mg/kg bw, the highest dose tested in a safety, tolerability and pharmacokinetics study in healthy human subjects, with application of an uncertainty factor of 10 for intraspecies variability. (JECFA81)			
Estimated Acute Dietary Exposure	A combined analysis of all studies submitted showed that after 14 days, the maximum values of residues found at injection sites led to a GEADE of 52 µg/kg bw for the general population and 87 µg/kg bw for children, corresponding, respectively, to 27% and 43% of the ARfD. (JECFA81)			
Residue Definition	Ivermectin B1a			
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	30	CAC 40 (2017)	
	Liver	800		
	Kidney	100		
	Fat	400		
	Milk	10		

Sheep	Liver	15	CAC 20 (1993)	
	Fat	20		

KETAMINE (Nervous System Drugs أدوية الجهاز العصبي)				
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
All food producing species	Not applicable	No MRL required	Commission Regulation (Eu) No 37/2010	

KETOPROFEN (Anti-Inflammatories non Steroidal مضاد الالتهابات الغير ستيرودية)				
Acceptable Daily Intake (ADI)		0.001 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	50	Australian standard MRL, 2012, Canadian MRL(2011)	
	Liver	50		
	Kidney	50		
	Fat	50		
	Milk (µg/l)	50		

LASALOCID SODIUM (anthelmintic agent مضاد الديدان)	
Acceptable Daily Intake (ADI)	0-5 µg/kg bw on the basis of a NOAEL of 0.5 mg/kg bw per day from a developmental toxicity study in rabbits and a multigeneration reproductive toxicity study in rats, with application of an uncertainty factor of 100 for interspecies and intraspecies variability. (JECFA78)
Estimated Dietary	80 µg/person per day was calculated, which represents

Exposure		approximately 27% of the upper bound of the ADI (JECFA78)		
Residue Definition		Lasalocid A		
Note		JECFA78 extended the MRLs in chicken to turkey and quail and extrapolated the MRLs in chicken to pheasant. No information was available for duck, including on approved uses. As the compound is not registered for use in laying hens, according to the sponsor, it is not appropriate to recommend .MRLs for egg		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	400	CAC 40 (2017)	
	Liver	1200		
	Kidney	600		
	Skin + fat	600		
Turkey	Muscle	400	CAC 40 (2017)	
	Liver	1200		
	Kidney	600		
	Skin + fat	600		
Quail	Muscle	400	CAC 40 (2017)	
	Liver	1200		
	Kidney	600		
	Skin + fat	600		
Pheasant	Muscle	400	CAC 40 (2017)	
	Liver	1200		
	Kidney	600		

	Skin + fat	600		

LEVAMISOLE (anthelmintic agent مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-6 µg/kg body weight		
Residue Definition		Levamisole		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	10	CAC 22 (1997)	
	Liver	100		
	Kidney	10		
	Skin	10		
Poultry	Muscle	10	CAC 22 (1997)	
	Liver	100		
	Kidney	10		
	Fat	10		
Sheep	Muscle	10		
	Liver	100		
	Kidney	10		
	Fat	10		

LINCOMYCIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-30 µg/kg body weight		
Residue Definition		Lincomycin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Milk	150	CAC 26 (2003)	
Chicken	Muscle	200	CAC 22 (1997)	
	Liver	500		
	Kidney	500		
	Fat	100		Additional MRL for skin with adhering fat of 300 µg/kg

LUFENURON (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0–0.02 mg/kg bw based on the NOAEL of 1.93 mg/kg bw per day for tonic-clonic seizures and findings in lungs, gastrointestinal tract, liver and urinary tract in a 2-year dietary study in rats, and using a safety factor of 100 (10 for interspecies variability and 10 for intraspecies variability)		
Acute Reference Dose		Unnecessary, in view of lufenuron low acute oral toxicity and the absence of developmental toxicity and other toxicological effects likely to be elicited by a single dose.		
Estimated Chronic Dietary Exposure		1.1 µg/kg bw per day (for the general population), which represents 5.5% of the upper bound of the ADI. As lufenuron is also used as pesticide, the overall dietary exposure was estimated. The assumptions and detailed results will be displayed in the JECFA85 report. Results below are only for use as veterinary drug.		
Residue Definition		Lufenuron		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Salmon	Fillet	1350	CAC 41 (2018)	
Trout	Fillet	1350	CAC 41 (2018)	

MADURAMICIN AMMONIUM (coccidial مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0.001 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	100	Australian standard MRL, 2012,	
	Liver	1000		
	Kidney	1000		
	Fat /skin	400	Canadian MRL(2011)	

MARBOFLOXACIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		4.5 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	150	EMEA/MRL/079/1996	
	Liver	150		
	Kidney	150		
	Fat /	50		
	Milk	75		

MEBENDAZOL (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		1.25 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Sheep	Muscle	60	EMEA/MRL/7	

	Liver	400	81/01-FINAL (2001)	
	Kidney	60		
	Fat	60		
Goat	Liver	60	EMEA/MRL/781/01-FINAL (2001)	
	Kidney	400		
	Fat	60		
	Liver	60		

MELENGESTROL ACETATE (production aid مساعد النمو)				
Acceptable Daily Intake (ADI)		0-0.03 µg/kg body weight		
Residue Definition		Melengestrol acetate		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	1	CAC 32 (2009)	
	Liver	10		
	Kidney	2		
	Fat	18		

MEBENDAZOL(Anti-Inflammatories non Steroidal مضاد الالتهابات الغير ستيرودية)				
Acceptable Daily Intake (ADI)		0.0001 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	10	Australian standard MRL, 2012	

	Liver	60	Canadian MRL(2011)	
	Kidney	20		
	Milk (µg/l)	5	Australian standard MRL, 2012	

Methyl benzoquate (coccidial مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0.005 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	100	Australian standard MRL, 2012	
	Liver	100		
	Kidney	100		
	Fat /skin	200	Canadian MRL (2011)	

MONENSIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)	0–10 µg/kg bw on the basis of a NOAEL of 1.14 mg/kg bw per day and a safety factor of 100 and rounding to one significant figure.			
Estimated Dietary Exposure	Using the revised MRL, the TMDI from JECFA70 was recalculated, resulting in a value of 481 µg/person, which represents 80% of the upper bound of the ADI			
Residue Definition	Monensin			
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	10	CAC 32 (2009)	
	Liver	100	CAC 35 (2012)	

	Kidney	10	CAC 32 (2009)	
	Fat	100		
	Milk	2		
Sheep	Muscle	10	CAC 32 (2009)	
	Liver	20		
	Kidney	10		
	Fat	100		
Goats	Muscle	10	CAC 32 (2009)	
	Liver	20		
	Kidney	10		
	Fat	100		
Chicken	Muscle	10	CAC 32 (2009)	
	Liver	10		
	Kidney	10		
	Fat	100		
Turkey	Muscle	10	CAC 32 (2009)	
	Liver	10		
	Kidney	10		
	Fat	100		

Quail	Muscle	10	CAC 32 (2009)	
	Liver	10		
	Kidney	10		
	Fat	100		

MONEPANTEL (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)	0–0.02 mg/kg bw based on the NOAEL of 1.93 mg/kg bw per day for tonic-clonic seizures and findings in lungs, gastrointestinal tract, liver and urinary tract in a 2-year dietary study in rats, and using a safety factor of 100 (10 for interspecies variability and 10 for intraspecies variability)			
Acute Reference Dose	Unnecessary			
Estimated Dietary Exposure	13.7 µg per kg bw per day (for the general population), which represents 68% of the upper bound of the ADI 5.0 µg per kg bw per day (for children), which represents 22% of the upper bound of the ADI 4.4 µg per kg bw per day (for infants), which represents 25% of the upper bound of the ADI			
Residue Definition	Monepantel sulfone, expressed as monepantel			
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Sheep	Muscle	500	CAC 38 (2015)	
	Liver	7000		
	Kidney	1700		
	Fat	13000		
Cattle	Muscle	300	CAC 41 (2018)	
	Liver	2000		
	Kidney	1000		

	Fat	7000		

MOXIDECTIN (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-2 µg/kg body weight		
Residue Definition		Moxidectin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	20	CAC 22 (1997)	Very high concentration and great variation in the level of residues at the injection site in cattle over a 49 day period after dosing
	Liver	100		
	Kidney	50		
	Fat	500		
Deer	Muscle	20	CAC 23 (1999)	
	Liver	100		
	Kidney	50		
	Fat	500		
Sheep	Muscle	50	CAC 22 (1997)	
	Liver	100		
	Kidney	50		
	Fat	500		

NARASIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-5 µg/kg bw on the basis of a NOAEL of 0.5 mg/kg bw per day and a safety factor of 100.		
Residue Definition		Narasin A		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	15	CAC 35 (2012)	
	Liver	50		
	Kidney	15		
	Fat	50		
Chicken	Muscle	15	CAC 32 (2009)	
	Liver	50		
	Kidney	15		
	Fat	50		

NATAMYCIN (Antifungal drugs أدوية المضادة للفطريات)				
Acceptable Daily Intake (ADI)		0.3 mg /kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Edible tissues	Withdrawn (for topical use only)	EMEA/MRL/342/98	

NEOMYCIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-60 µg/kg body weight		
Residue Definition		Neomycin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	500	CAC 23 (1999)	
	Liver	500	CAC 28 (2005)	
	Kidney	10000		
	Fat	500	CAC 23 (1999)	
	Milk	1500	CAC 28 (2005)	
Chicken	Muscle	500	CAC 23 (1999)	
	Liver	500		
	Kidney	10000		
	Fat	500		
	Eggs	500		
Duck	Muscle	500	CAC 23 (1999)	
	Liver	500		
	Kidney	10000		
	Fat	500		
Goat	Muscle	500	CAC 23 (1999)	
	Liver	500		
	Kidney	10000		

	Fat	500		
Sheep	Muscle	500	CAC 23 (1999)	
	Liver	500		
	Kidney	10000		
	Fat	500		
Turkey	Muscle	500	CAC 23 (1999)	
	Liver	500		
	Kidney	10000		
	Fat	500		

NICARBAZIN (antiprotozoal agent مضادات الطفيليات)				
Acceptable Daily Intake (ADI)		0-400 µg/kg body weight.		
Residue Definition		N'-bis(4-nitropheyl)urea,		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	200	CAC 23 (1999)	Broilers
	Liver	200		Broilers
	Kidney	200		Broilers
	Fat	200		Broilers

NITOBIMIN (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		5 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**

Cattle	Muscle	100	EMEA/MRL/565/99-FINAL (1999)	
	Liver	1000		
	Kidney	500		
	Fat	100		
	Milk	100		
Sheep	Muscle	100	EMEA/MRL/565/99-FINAL (1999)	
	Liver	1000		
	Kidney	500		
	Fat	100		
	Milk	100		
Goat	Muscle	100	EMEA/MRL/565/99-FINAL (1999)	
	Liver	1000		
	Kidney	500		
	Fat	100		
	Milk	100		

NITROXYNIL (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-20 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	1000	Australian standard MRL, 2012	
	Liver	1000		
	Kidney	1000		
	Fat	1000		
Goat	Muscle	1000	Australian standard MRL, 2012	
	Liver	1000		
	Kidney	1000		
	Fat	1000		
Sheep	Muscle	1000	Australian standard MRL, 2012	
	Liver	1000		
	Kidney	1000		
	Fat	1000		

NITROXYNIL (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		1.25 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Australian standard MRL, 2012	
	Liver	100		

	Kidney	50		
	Milk	100		

NYSTATIN (Antifungal drugs أدوية المضادة للفطريات)				
Acceptable Daily Intake (ADI)		Not established		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Edible tissues	Withdrawn (for topical use only)	EMEA/MRL/CVMP/151/99	
Poultry	Edible tissues	Withdrawn (for topical use only)		

OLEANDOMYCIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0.00075 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Australian standard MRL, 2012	
	Liver	100		
	Kidney	100		
Sheep	Muscle	100	Australian standard MRL, 2012	
	Liver	100		
	Kidney	100		
Goat	Muscle	100	Australian standard MRL, 2012	
	Liver	100		
	Kidney	100		

Camel	Muscle	100	Australian standard MRL, 2012	
	Liver	100		
	Kidney	100		

ORMETOPRIM (Anticoccidial drugsمضاد الطفيليات)				
Acceptable Daily Intake (ADI)		4 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Salmon	Muscle	100	Canadian MRL(2011)	
	Skin	100		

OXYCLOZANIDE (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0.03 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	20	EMEA/MRL/889/03-FINAL (2004)	
	Liver	500		
	Kidney	100		
	Fat	20		
	Milk	10		
Sheep	Muscle	20	EMEA/MRL/889/03-FINAL (2004)	
	Liver	500		
	Kidney	100		

	Fat	20		

OXYTETRACYCLINE (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-3 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Australian standard MRL, 2012	
	Liver	300		
	Kidney	600		
	Milk	100	Canadian MRL 2011	
Goat	Muscle	100	Australian standard MRL, 2012	
	Liver	300		
	Kidney	600		
	Milk	100		
Sheep	Muscle	100	Australian standard MRL, 2012	
	Liver	300		
	Kidney	600		
	Milk	100		
Camel	Muscle	100	Australian standard MRL, 2012	
	milk	100		
Chicken	Muscle	100	Canadian MRL 2011	

	Liver	600		
	Kidney	1200		
	Eggs	400		
Turkey	Muscle	200	Canadian MRL 2011	
	Liver	600		
	Kidney	1200		
Salmonids Lobsters	Muscle	200	Canadian MRL 2011	
	Skin	200		

OXYTOCIN (Antifungal drugs أدوية المضادة للفطريات)				
FSpecies	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
All food producing species	Not applicable	No MRL required	EMEA/MRL/054/95	

PERMETHRIN (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0.05 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	50	COMMISSION REGULATION (EU) NO 37/2010	
	Liver	50		
	Kidney	50		

	Fat	500		
	Milk	50		

PHOXIM (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0-4 µg/kg body weight		
Residue Definition		Phoxim		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Goat	Muscle	50	CAC 26 (2003)	
	Liver	50		
	Kidney	50		
	Fat	400		
Sheep	Muscle	50	CAC 26 (2003)	
	Liver	50		
	Kidney	50		
	Fat	400		

PIPERAZINE (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0.25 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Eggs	2 000	COMMISSION REGULATION (EU) NO 37/2010	

Pirlimycin (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)	0-8 µg/kg body weight			
Residue Definition	Pirlimycin			
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	CAC 29 (2006)	
	Liver	1000		
	Kidney	400		
	Fat	100		
	Milk	100		JECFA evaluated the effect of pirlimycin residues on starter cultures and for this reason recommended an MRL of 100 µg/kg of milk. Codex Members may therefore adapt national/regional MRLs in order to address this technological aspect for trade of fresh liquid milk intended for processing using starter culture.

POLOXALENE (Digestive System Drugs أدوية الجهاز الهضمي)				
Acceptable Daily Intake (ADI)	0.02 mg /kg body weight			
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
All food producing species	Not applicable	No MRL required	COMMISSION REGULATION (EU) No 37/2010	

POLYMIXIN B (antimicrobial agent مضاد الميكروبات)	
Acceptable Daily Intake	4.0 u/ml body weight

(ADI)				
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Milk	4000 U/ml	Canadian MRL(2011)	

PRAZEQUANTEL (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-20 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Sheep	Muscle	50	Australian standard MRL, 2012	
	Liver	50		
	Kidney	50		
	Fat	50		

PREDNISOLONE (glucocorticosteroid مضادات الالتهابات الستيرودية)				
Acceptable Daily Intake (ADI)		0.0002 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	4	COMMISSION REGULATION (EU) No 37/2010	
	Liver	10		
	Kidney	10		
	Fat	4		
	Milk	6		

PROCAINE BENZYL PENICILLIN (antimicrobial agent مضاد الميكروبات)	
Acceptable Daily Intake (ADI)	30 µg penicillin/person/day

Species	Tissue	MRL (µg/kg)	Referance	Notes
Cattle	Muscle	50	Australian standard MRL, 2012	
	Liver	50		
	Kidney	50		
	Milk	1.5		

Procaine HCl (Nervous System Drugs أدوية الجهاز العصبي)				
Acceptable Daily Intake (ADI)		not established		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
All food producing species	Not applicable	No MRL required	COMMISSION REGULATION (EU) No 37/2010	

PROGESTERONE (production aid مساعد انتاج)				
Acceptable Daily Intake (ADI)		0-30 µg/kg body weight		
Residue Definition		Progesterone		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	unnecessary	CAC 21 (2005)	Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health.
	Liver	unnecessary		
	Kidney	unnecessary		
	Fat	unnecessary		

RACTOPAMINE (production aid مساعد انتاج)	
Acceptable Daily Intake (ADI)	0-30 µg/kg body weight
Residue Definition	Ractopamine

Species	Tissue	MRL (µg/kg)	Referance	Notes
Cattle	Muscle	10	CAC 35 (2012)	
	Liver	40		
	Kidney	90		
	Fat	10		

RAFOXANIDE (Anthelmintic agents مضاد الديدان)				
Acceptable Daily Intake (ADI)		2 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	30	EMEA/MRL/636/99 FINAL (1999)	
	Liver	10		
	Kidney	40		
	Fat	30		
Sheep	Muscle	100	EMEA/MRL/636/99 FINAL (1999)	
	Liver	150		
	Kidney	150		
	Fat	250		

ROBENIDINE HYDROCHLORIDE (Anticoccidial drugsمضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0.005 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	100	Canadian MRL(2011) Australian standard MRL, 2012	
	Liver	100		
	Kidney	100		
	Fat /skin	200	Canadian MRL(2011)	

ROXARSONE (Growth Promoting Agent محفز النمو)				
Acceptable Daily Intake (ADI)		25 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	500	Canadian MRL(2011)	
	Liver	200		
	Eggs	500		
Turkey	Muscle	500	Canadian MRL(2011)	
	Liver	200		

SALINOMYCIN SODIUM (Anticoccidial drugs مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0.01 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	50	Australian standard MRL, 2012	
	Liver	350	Canadian MRL(2011)	
	Kidney	500	Australian standard MRL, 2012	
Chicken	Muscle	100	Australian standard MRL, 2012	
	Liver	500		
	Kidney	500		
	Fat	350	Canadian MRL(2011)	
	Eggs	20	Australian standard MRL, 2012	

SARAFLOXACIN (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0-0.3 µg/kg body weight		
Residue Definition		Sarafloxacin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	10	CAC 24 (2001)	
	Liver	80		
	Kidney	80		
	Fat	20		
Turkey	Muscle	10	CAC 24 (2001)	
	Liver	80		
	Kidney	80		
	Fat	20		

SEMDURAMICIN (Anticoccidial drugs مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		3 ug/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	50	National Registration Authority for Agricultural and Veterinary Chemicals, Australia, 2001	
	Liver	500		
	Kidney	200		
	Fat /skin	500		

SPECTINOMYCIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-40 µg/kg body weight		
Residue Definition		Spectinomycin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	500	CAC 23 (1999)	
	Liver	2000		
	Kidney	5000		
	Fat	2000		
	Milk µg/l	200		
Chicken	Muscle	500	CAC 23 (1999)	
	Liver	2000		
	Kidney	5000		
	Fat	2000		
	Eggs	2000		
Sheep	Muscle	500		
	Liver	2000		
	Kidney	5000		
	Fat	2000		

SPIRAMYCIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-50 µg/kg body weight		
Residue Definition		Cattle and chickens, sum of spiramycin and neospiramycin; spiramycin equivalents antimicrobially active residues.		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	200	CAC 22 (1997)	
	Liver	600		
	Kidney	300		
	Fat	300		
	Milk µg/l	200		
Chicken	Muscle	200	CAC 22 (1997)	
	Liver	600		
	Kidney	800		
	Fat	300		

STREPTOMYCIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-50 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	300	Australian standard MRL, 2012	
	Liver	300		
	Kidney	300		
	Fat	500	Canadian MRL, 2011	

	Milk (µg/l)	125		
Goat	Muscle	300	Australian standard MRL, 2012	
	Liver	300		
	Kidney	300		
	Milk (µg/l)	200		
Sheep	Muscle	300	Australian standard MRL, 2012	
	Liver	300		
	Kidney	300		
	Fat	600		
	Milk (µg/l)	200		
Camel	Muscle	100	Australian standard MRL, 2012	
	milk	100		
Camel	Muscle	300	Australian standard MRL, 2012	
	Liver	300		
	Kidney	300		
	Milk (µg/l)	200		

SULFADIMIDINE (antimicrobial agent مضاد الميكروبات)	
Acceptable Daily Intake (ADI)	0-50 µg/kg body weight
Residue Definition	Sulfadimidine

Species	Tissue	MRL (µg/kg)	Referance	Notes
Cattle	Milk µg/l	25	CAC 21 (1995)	
Not specified	Muscle	100	CAC 21 (1995)	
	Liver	100		
	Kidney	100		
	Fat	100		

TEFLUBENZURON (insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)	0-5 µg/kg bw on the basis of a lower 95% confidence limit on the benchmark dose for a 10% response (BMDL10) of 0.54 mg/kg bw per day for hepatocellular hypertrophy in male mice observed in a carcinogenicity study, with application of an uncertainty factor of 100 to account for interspecies and intraspecies variability.			
Estimated Chronic Dietary Exposure	The EDI is 42.9 µg/person per day, on the basis of a 60 kg individual, which represents approximately 14% of the upper bound of the ADI. The GECDE for the general population is 1.6 µg/kg bw per day, which represents 31% of the upper bound of the ADI. The GECDE for children is 2.1 µg/kg bw per day, which represents 43% of the upper bound of the ADI. The GECDE for infants is 0.9 µg/kg bw per day, which represents 18% of the upper bound of the ADI.			
Residue Definition	Teflubenzuron			
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Salmon	Muscle	400	CAC 40 (2017)	
	Fillet	400		Muscle plus skin in natural proportion

TESTOSTERONE (production aid مساعد انتاج)	
Acceptable Daily Intake (ADI)	0-2 µg/kg body weight

Residue Definition		Testosterone		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	unnecessary	CAC 21 (1995)	Residues resulting from the use of this substances as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health.
	Liver	unnecessary		
	Kidney	unnecessary		
	Fat	unnecessary		

TETRACYCLINE (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-3 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	COMMISSION REGULATION (EU) No 37/2010	
	Liver	300		
	Kidney	600		
	Fat	100		
	Milk (µg/l)	100		
Goat	Muscle	100	COMMISSION REGULATION (EU) No 37/2010	
	Liver	300		
	Kidney	600		
	Milk (µg/l)	100		
Sheep	Muscle	100	COMMISSION REGULATION (EU) No 37/2010	
	Liver	300		
	Kidney	600		

	Milk (µg/l)	100		
Chicken	Muscle	100	COMMISSION REGULATION (EU) No 37/2010	
	Liver	300		
	Kidney	600		
	Eggs	200		

THIABENDAZOLE (Anthelmintic agent مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-100 µg/kg body weight		
Residue Definition		Sum of thiabendazole and 5-hydroxythiabendazole		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	CAC 21 (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
	Liver	100		
	Kidney	100		
	Fat	100		
	Milk µg/l	100		
Goat	Muscle	100	CAC 21 (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
	Liver	100		
	Kidney	100		
	Fat	100		
	Milk µg/l	100		
Sheep	Muscle	100	CAC 21 (1995)	The MRL also covers residues derived from feed containing the residues resulted from agricultural use.
	Liver	100		
	Kidney	100		
	Fat	100		

THIAMPHENICOL (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-1 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**

Cattle	Muscle	50	COMMISSION REGULATION (EU) No 37/2010	
	Liver	50		
	Kidney	50		
	Fat	50		
	Milk µg/l	50		
Goat	Muscle	50	COMMISSION REGULATION (EU) No 37/2010	
	Liver	50		
	Kidney	50		
	Fat	50		
	Milk µg/l	50		
Sheep	Muscle	50	COMMISSION REGULATION (EU) No 37/2010	
	Liver	50		
	Kidney	50		
	Fat	50		
	Milk (µg/l)	50		

TIAMULIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-30 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Chicken	Muscle	100	COMMISSION REGULATION (EU) No 37/2010	
	Liver	1000		
	Fat/skin	100		
	Eggs	1000		
Turkey	Muscle	100	COMMISSION REGULATION (EU) No 37/2010	
	Liver	300		
	Fat/skin	100		
Rabbit	Muscle	100	COMMISSION REGULATION (EU) No 37/2010	
	Liver	500		

TILMICOSIN (antimicrobial agent مضاد الميكروبات)	
Acceptable Daily Intake	0-40 µg/kg body weight

(ADI)				
Residue Definition		Tilmicosin		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	CAC 23 (1999)	
	Liver	1000		
	Kidney	300		
	Fat	100		
Chicken	Muscle	150	CAC 36 (2011)	
	Liver	2400		
	Kidney	600		
	Skin/Fat	250		
Sheep	Muscle	100	CAC 23 (1999)	
	Liver	1000		
	Kidney	300		
	Fat	100		
Turkey	Muscle	100	CAC 34 (2011)	
	Liver	1200		
	Kidney	1400		
	Skin/Fat	250		

TOLFENAMIC ACID (Anti-Inflammatories non Steroidal مضادات الالتهابات غير الستيرودية)				
Acceptable Daily Intake (ADI)		0-0.1 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	50	EMEA/MRL/183/97 FINAL (1997)	
	Liver	400		
	Kidney	100		
	Milk (µg/l)	50		

TOLTRAZURIL (Anticoccidial drugs مضاد الطفيليات)				
Acceptable Daily Intake (ADI)		0-2 µg/kg body weight		
Residue Definition		Toltrazuril		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	250	Australian standard MRL, 2012	
	Liver	2000		
	Kidney	1000		
	Fat	1000		
Chicken	Muscle	2000	Australian standard MRL, 2012	
	Liver	5000		
	Kidney	5000		
	Eggs	30		

TRENBOLONE ACETATE (Growth Promoting Agent محفز النمو)				
Acceptable Daily Intake (ADI)		0-0.2 µg/kg body weight		
Residue Definition		Cattle muscle, beta-Trenbolone; Cattle liver, alpha-Trenbolone		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	2	CAC 21 (1995)	
	Liver	10		

TRICAINE METHANESULFONATE (Nervous System Drugs أدوية الجهاز العصبي)				
Acceptable Daily Intake (ADI)		not established		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Salmonids	Muscle	10	Canadian MRL(2011)	
	Skin	10		

TRICHLORFON (Metrifonate)(insecticide مبيد حشري)				
Acceptable Daily Intake (ADI)		0-2 µg/kg body weight		
Residue Definition		JECFA54 confirmed the MRL for cows's milk and the guidance levels for muscle, liver, kidney and fat of cattle recommended (WHO TRS 900, 2001)		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Milk	50	CAC 29 (2008)	

TRICLABENDAZOLE (Anthelmintic agent مضاد الديدان)				
Acceptable Daily Intake (ADI)		0-3 µg/kg body weight		
Residue Definition		Ketotriclabnedazole		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	250	CAC 32 (2009)	
	Liver	850		
	Kidney	400		
	Fat	100		
Sheep	Muscle	200	CAC 32 (2009)	
	Liver	300		
	Kidney	200		
	Fat	100		

TRIMETHOPRIM (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		20 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	50	Australian standard MRL, 2012	
	Liver	50		
	Kidney	50		
	Fat	50		
	Milk µg/l	50		
Goat	Muscle	50	Australian standard MRL,	
	Liver	50		
	Kidney	50		
	Fat	50		

	Milk µg/l	50	2012	
Sheep	Muscle	50	Australian standard MRL, 2012	
	Liver	50		
	Kidney	50		
	Fat	50		
	Milk (µg/l)	50		

TRIMETHOPRIM (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0.005 mg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Australian standard MRL, 2012	
	Liver	2000	Canadian MRL 2011	
	Kidney	1000	Australian standard MRL, 2012	
	Fat	100		

TYLOSIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		0-30 µg/kg bw based on a microbiological end-point derived from in vitro MIC susceptibility testing and faecal binding data (MICcalc = 1.698)		
Residue Definition		Tylosin A		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	CAC 32 (2009)	
	Liver	100		
	Kidney	100		
	Fat	100		
	Milk	100		
Chicken	Muscle	100	CAC 32 (2009)	
	Liver	100		
	Kidney	100		
	Skin/Fat	100		

	Eggs	300		

VIRGINIAMYCIN (antimicrobial agent مضاد الميكروبات)				
Acceptable Daily Intake (ADI)		250 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	100	Australian standard MRL, 2012	
	Liver	200		
	Kidney	200		
	Fat	200		
	Milk µg/l	100		
Chicken	Muscle	200	Australian standard MRL, 2012	
	Liver	200		
	Kidney	200		
	Fat /skin	200		
	Eggs			

ZERANOL (Growth Promoting Agent محفز النمو)				
Acceptable Daily Intake (ADI)		0-0.5 µg/kg body weight		
Residue Definition		Zeranol		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	2	CAC 21 (1995)	
	Liver	10		

ZILPATEROL (Growth Promoting Agent محفز النمو)				
Acceptable Daily Intake (ADI)		0.083 µg/kg body weight		
Species	**Tissue**	**MRL (µg/kg)**	**Referance**	**Notes**
Cattle	Muscle	2	Canadian MRL(2011)	
	Liver	5		
	Kidney	5		

المراجع:

- ACCEPTABLE DAILY INTAKES (ADI) FOR AGRICULTURAL AND VETERINARY CHEMICALS. Australian Government, Department of Health and Aging Office of Chemical Safety. 31 December 2012.
- Australian Standard (2012), Australian Pesticides and Veterinary Medicines Authority, The MRL Standard, Maximum residue limits in food and animal feedstuff July 2012.
- Canadian Standards, Maximum residue limits (MRLs) of veterinary drugs in food, 2011.
- Codex Alimentarius Commission (CAC), Maximum residue limits (MRLs) of veterinary drugs in food . 35th Session of the Codex Alimentarius Commission (July 2012)
- Codex Alimentarius Commission (CAC), Maximum residue limits (MRLs) of veterinary drugs in food 2011.
- COMMISSION REGULATION (EU) No 37/2010
- COUNCIL REGULATION (EEC) No 2377/90
- http://www.fve.org/veterinary/pdf/medicines/regulation_2377_90_en.pdf
- EMEA/MRL/865/03-FINAL, June 2004 : The European Agency for the Evaluation of Medicinal products. Veterinary Medicines and Information Technology Unit.
- EMEA/MRL/CVMP/151/99-FINAL, March 1999. The European Agency for the Evaluation of Medicinal products. Veterinary Medicines and Information Technology Unit. Committee for Veterinary Medical Products.
- EMEA/MRL/889/03-FINAL. June 2004. The European Agency for the Evaluation of Medicinal products. Veterinary Medicines and Information Technology Unit. Committee for Veterinary Medical Products.
- EMEA/MRL/342/00-FINAL. January 2001. The European Agency for the Evaluation of Medicinal products. Veterinary Medicines and Information Technology Unit. Committee for Veterinary Medical Products.
- EMEA/MRL/565/99-FINAL April (1999). The European Agency for the Evaluation of Medicinal products. Veterinary Medicines and Information Technology Unit. Committee for Veterinary Medical Products.

- EMEA/MRL/342/98-FINAL. February 1998. The European Agency for the Evaluation of Medicinal products. Veterinary Medicines and Information Technology Unit. Committee for Veterinary Medical Products.
- EUROPEAN COMMUNITY COMMENTS ON CODEX CIRCULAR LETTER CL 2005-10 RVDF.
- EMEA/MRL/079/96-FINAL, March 1996. The European Agency for the Evaluation of Medicinal products. Veterinary Medicines and Information Technology Unit.

CODEX GENERAL STANDARD FOR CONTAMINANTS AND TOXINS IN FOODS

CODEX STAN 193-1995 (Rev.1-1997) [1]

1. PREAMBLE

1.1 SCOPE

This Standard contains the main principles and procedures which are used and recommended by the Codex Alimentarius in dealing with contaminants and toxins in foods and feeds, and lists the maximum levels of contaminants and natural toxicants in foods and feeds which are recommended by the CAC to be applied to commodities moving in international trade.

1.2 DEFINITION OF TERMS

1.2.1 General

The definitions for the purpose of the Codex Alimentarius, as mentioned in Volume 1, are applicable to the GSC and only the most important ones are repeated here. Some new definitions are introduced, where this seems warranted to obtain optimal clarity. When reference is made to foods, this also applies to animal feed, in those cases where this is appropriate.

1.2.2 Contaminant

Volume 1 of the Codex Alimentarius defines a contaminant as follows:

"Any substance not intentionally added to food, which is present in such food as a result of the production (including operations carried out in crop husbandry, animal husbandry and veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food or as a result of environmental contamination. The term does not include insect fragments, rodent hairs and other extraneous matter".

This standard applies to any substance that meets the terms of the Codex definition for a contaminant, including contaminants in feed for food-producing animals, except:

1) Contaminants having only food quality significance, but no public health significance, in the food(s).

2) Pesticide residues, as defined by the Codex definition that are within the terms of reference of the CCPR. Pesticide residues arising from pesticide uses not associated with food production may be considered for inclusion in the General Standard for Contaminants if not dealt with by the CCPR.

3) Residues of veterinary drugs, as defined by the Codex definition, that are within the terms of reference of the CCRVDF.

---

[1] The Preamble to the Codex General Standard for Contaminants and Toxins in Foods was adopted by the 21st Session of the Codex Alimentarius Commission in July 1995. Annexes I-III, the introduction to Annex IV and Annex V were adopted by the Commission at its 22nd Session, 1997. Annex IV-A and Annex IV-B concerning the Annotated List of Contaminants and Toxins have still to be developed.

4) Microbial toxins, such as botulinum toxin and staphylococcus enterotoxin, and microorganisms that are within the terms of reference of the CCFH.

5) Processing aids (that by definition are intentionally added to foods).

1.2.3 Natural toxins included in this standard

The Codex definition of a contaminant implicitly includes naturally occurring toxicants such as are produced as toxic metabolites of certain microfungi that are not intentionally added to food (mycotoxins).

Microbial toxins that are produced by algae and that may be accumulated in edible aquatic organisms such as shellfish (phycotoxins) are also included in this standard. Mycotoxins and phycotoxins are both subclasses of contaminants.

Inherent natural toxicants that are implicit constituents of foods resulting from a genus, species or strain ordinarily producing hazardous levels of a toxic metabolite(s), i.e. phytotoxins are not generally considered within the scope of this standard. They are, however, within the terms of reference of the CCFAC and will be dealt with on a case by case basis.

1.2.4 Maximum level and related terms

The ***Codex maximum level (ML)*** for a contaminant in a food or feed commodity is the maximum concentration of that substance recommended by the CAC to be legally permitted in that commodity.

A ***Codex guideline level*** (***GL)*** is the maximum level of a substance in a food or feed commodity which is recommended by the CAC to be acceptable for commodities moving in international trade. When the GL is exceeded, governments should decide whether and under what circumstances the food should be distributed within their territory or jurisdiction. [2]

1.3 GENERAL PRINCIPLES REGARDING CONTAMINANTS IN FOODS

1.3.1 General

Foods and feeds can become contaminated by various causes and processes. Contamination generally has a negative impact on the quality of the food or feed and may imply a risk to human or animal health.

Contaminant levels in foods shall be as low as reasonably achievable. The following actions may serve to prevent or to reduce contamination of foods and feeds:

- preventing food contamination at the source, e.g. by reducing environmental pollution.
- applying appropriate technology in food production, handling, storage, processing and packaging.
- applying measures aimed at decontamination of contaminated food or feed and measures to prevent contaminated food or feed to be marketed for consumption.

[2] Because the CAC has decided that the preferred format of a Codex standard in food or feed is a maximum level, the present existing or proposed guideline levels shall be reviewed for their possible conversion to a maximum level.

To ensure that adequate action is taken to reduce contamination of food and feed a Code of Practice shall be elaborated comprising source related measures and Good Manufacturing Practice as well as Good Agricultural Practice in relation to the specific contamination problem.

The degree of contamination of foods and feeds and the effect of actions to reduce contamination shall be assessed by monitoring, survey programs and more specialized research programs, where necessary.

When there are indications that health hazards may be involved with consumption of foods that are contaminated, it is necessary that a risk assessment is made. When health concerns can be substantiated, a risk management policy must be applied, based on a thorough evaluation of the situation. Depending on the assessment of the problems and the possible solutions, it may be necessary to establish maximum levels or other measures governing the contamination of foods. In special cases, it may also have to be considered to give dietary recommendations, when other measures are not sufficiently adequate to exclude the possibility of hazards to health.

National measures regarding food contamination should avoid the creation of unnecessary barriers to international trade in food or feed commodities. The purpose of the Codex General Standard for Contaminants in Food is to provide guidance about the possible approach of the contamination problem and to promote international harmonization through recommendations which may help to avoid the creation of trade barriers.

For all contaminants, which may be present in more than one food or feed item, a broad approach shall be applied, taking into account all relevant information that is available, for the assessment of risks and for the development of recommendations and measures, including the setting of maximum levels.

1.3.2 Principles for establishing maximum levels in foods and feeds

Maximum levels shall only be set for those foods in which the contaminant may be found in amounts that are significant for the total exposure of the consumer. They shall be set in such a way that the consumer is adequately protected. At the same time the technological possibilities to comply with maximum levels shall be taken into account. The principles of Good Manufacturing Practice, Good Veterinary Practice and Good Agricultural Practice shall be used. Maximum levels shall be based on sound scientific principles leading to levels which are acceptable worldwide, so that international trade in these foods is facilitated. Maximum levels shall be clearly defined with respect to status and intended use.

I.3.3 Specific criteria

The following criteria shall (not preventing the use of other relevant criteria) be considered when developing recommendations and making decisions in connection with the Codex General Standard for Contaminants in Food: (Further details about these criteria are given in Annex I).

Toxicological information

- identification of the toxic substance(s)
- metabolism by humans and animals, as appropriate
- toxicokinetics and toxicodynamics
- information about acute and long term toxicity and other relevant toxicity
- integrated toxicological expert advice regarding the acceptability and safety of intake levels of contaminants, including information on any population groups which are specially vulnerable

Analytical data

- validated qualitative and quantitative data on representative samples

- appropriate sampling procedures

Intake data

- presence in foods of dietary significance for the contaminant intake
- presence in foods that are widely consumed
- food intake data for average and most exposed consumer groups
- results from total diet studies
- calculated contaminant intake data from food consumption models
- data on intake by susceptible groups

Fair trade considerations

- existing or potential problems in international trade
- commodities concerned moving in international trade
- information about national regulations, in particular on the data and considerations on which these regulations are based

Technological considerations

- information about contamination processes, technological possibilities, production and manufacturing practices and economic aspects related to contaminant level management and control.

Risk assessment and risk management considerations

- risk assessment
- risk management options and considerations
- consideration of possible maximum levels in foods based on the criteria mentioned above.
- consideration of alternative solutions

1.4 CODEX PROCEDURE FOR ESTABLISHING STANDARDS FOR CONTAMINANTS IN FOOD

1.4.1 General

The Procedure for the elaboration of Codex Standards, as contained in the Procedural Manual, is applicable. Further details are mentioned here regarding the procedure to be followed and the criteria for decision making, in order to clarify and to facilitate the process of the elaboration of Codex Standards for contaminants.

1.4.2 Procedure for preliminary discussion about contaminants in the CCFAC

Suggestions for new contaminants or new contaminant/commodity combinations to be discussed in the CCFAC and to be included in the GSC may be raised by delegates or by the secretariat. An initial discussion may be held based on oral contributions, but preferably on the basis of a note containing relevant and adequate information. For a satisfactory preliminary review the following information is essential:

1) Identification of the contaminant and concise information about the background of the problem.

2) Indications about the availability of toxicological information and analytical and intake data, including references.

3) Indications about (potential) health problems.

4) Indications about existing and expected barriers to international trade.

5) Information about technological possibilities and economic aspects related to the management of the contaminant problem in food.

6) Preferably a proposal for action by the CCFAC.

When a delegation wishes that the Committee shall consider a request for action concerning a specific contaminant this delegation shall, as far as possible, supply information as stated above to serve as the basis for a preliminary review and request the Secretariat to include the matter on the agenda of the next meeting of the Committee.

1.4.3 Procedure for risk management decisions in the CCFAC regarding contaminants

An evaluation by JECFA of the toxicological and of other aspects of a contaminant and subsequent recommendations regarding the acceptable intake and regarding maximum levels in foods shall be the main basis for decisions to be discussed by the CCFAC. In the absence of recommendations by JECFA, decisions may be taken by CCFAC when sufficient information from other sources is available to the Committee and the matter is considered urgent.

The CCFAC procedure for risk management decisions is further described in Annex II.

1.5 FORMAT OF THE STANDARD FOR CONTAMINANTS IN FOODS

The General Standard for Contaminants in Foods contains two types of presentation for the Standards: Schedule I in which the standards are listed per contaminant in the various food categories, and Schedule II in which the contaminant standards are presented per food (category).

The format of the presentation is according to the provisions described in the Procedural Manual, in so far they are applicable. In order to obtain maximal clarity, explanatory notes shall be added where appropriate. The format contains all elements necessary for full understanding of the meaning, background, application and scope of the standards and contains references to the relevant documents and discussion reports on which the standard is based.

A full description of the format is given in Annex III.

The listing of the Codex Standards for the different contaminants may be according to a numbering system for contaminants (see Annex IV). The Codex standards are summarized in a list of contents, and an alphabetical listing of the contaminants shall be added for easy reference.

For each session of the CCFAC, a working document shall be prepared in which the complete list of Codex Standards for contaminants in foods (both proposed and agreed) is presented in the form of Schedule I.

The list of Codex contaminant standards for individual foods or food categories shall be presented according to an agreed food categorization system. See Annex V.

1.6 REVIEW AND REVISION OF THE STANDARD

The contaminant provisions for this Standard shall be reviewed on a regular basis and revised as necessary in the light of revisions of toxicological advice by JECFA or of changed risk management views, residue management possibilities, scientific knowledge or other important relevant developments.

Specific attention shall be given to the review of existing Maximum Levels and Guideline Levels and to their possible conversion to Maximum Levels.

ANNEX I

CRITERIA FOR THE ESTABLISHMENT OF MAXIMUM LEVELS IN FOODS

Introduction

In this Annex criteria are mentioned regarding information which is considered necessary for evaluating contaminant problems in foods and for the establishment of maximum levels. It is therefore important that these criteria are taken into account when information is supplied to JECFA and/or to the CCFAC.

The criteria mentioned here are elaborated in more detail than in section I.3.3. of the Preamble. Only those aspects are mentioned that need further clarification, so criteria or aspects that are not mentioned here should not be ruled out in the evaluation process.

Toxicological information

Integrated toxicological expert advice regarding a safe/tolerable intake level of a contaminant is essential when decisions about maximum levels in foods are considered. A recommendation from JECFA regarding the maximum allowable or tolerable intake, based on a full evaluation of an adequate toxicological data base, shall be the main basis for decisions by CCFAC. In urgent cases, it may be possible to rely on less developed evaluations from JECFA or on toxicological expert advice from other international or national bodies.

When toxicological information is presented in relation to proposals for maximum levels for contaminants in foods, indications are desirable about the following aspects:

- identification of the toxic substance(s)
- metabolism in humans and animals, as appropriate
- toxicokinetics and toxicodynamics
- information about acute and long term toxicity in animals and humans, including epidemiological data on humans and other relevant toxicity data
- conclusions and advice of toxicological expert(s) (groups), with references, including information on specially vulnerable population groups or animals.

Analytical data

Validated qualitative and quantitative analytical data on representative samples should be supplied. Information on the analytical and sampling methods used and on the validation of the results is desirable. A statement on the representativity of the samples for the contamination of the product in general (e.g. on a national basis) should be added. The portion of the commodity that was analyzed and to which the contaminant content is related should be clearly stated and preferably should be equivalent to the definition of the commodity for this purpose or to existing related residue regulation.

Appropriate sampling procedures should be applied. Special attention to this aspect is necessary in the case of contaminants that may be unequally distributed in the product (e.g. mycotoxins in some commodities).

Intake data

It is desirable to have information about the contaminant concentrations in those foods or food groups that (together) are responsible for at least half and preferably 80% or more of the total dietary intake of the contaminant, both for average consumers and for high consumers.

Information about the ***presence of the contaminant in foods that are widely consumed*** (staple foods) is desirable in order to be able to make a satisfactory assessment of the contaminant intake and of risks associated with food trade.

Food consumption data for average, most exposed and susceptible consumer groups are desirable for evaluations of (potential) intake of contaminants. This problem, however, has to be addressed differently on a national and on an international scale. It is therefore important to have information about both average and high consumption patterns regarding a wide scale of foodstuffs, so that for every contaminant the most exposed consumer groups may be identified. Detailed information about high consumption patterns is desirable, both regarding group identification criteria (e.g. age or sex differences, vegetarian or regional dietary customs, etc.) and statistical aspects.

Dietary intake of contaminants**:** Reference is made to the Guidelines for the study of dietary intake of chemical contaminants (WHO). It is important to supply all relevant details, such as the type of study (duplicate diet, total diet or market basket study, selective study), and statistical details. Calculated contaminant intake data from food consumption models may also be useful. When results about food groups and about effects of preparation and cooking etc. are available, these should also be supplied.

Fair trade considerations

Existing, expected or potential problems in international trade: In order to assess the urgency of a problem to be discussed by CCFAC it is important to have information about the magnitude of existing or expected problems, both regarding the amount and the source of the food or feed that is at stake and the concerned parties and economic aspects involved. Potential problems should also be indicated.

Foods concerned moving in international trade: The main exporting and importing countries for commodities which are involved in the issue should be identified and it is essential that information is available about contaminant concentrations in the commodities originating from the main exporting countries.

Information about national regulations: It is desirable that details are made available by countries (especially the main exporting and importing countries) about their national regulations regarding the contaminant in question, in particular on the data and the considerations on which these regulations are based. For a good evaluation of the problem it is essential that not only the data base is clear, but also the risk assessment and risk management policy which is used for making decisions regarding maximum levels in foods.

Technological considerations

Information about the source of the contaminant and the way in which the food is contaminated, possibly including information, if it is available, about contamination being present in parts only of the product, is essential for assessing the possibilities to control the contamination process and to be able to guarantee a desired product quality. Where possible ***Source-related measures*** should be proposed. ***Good Manufacturing Practice (GMP)*** and/or ***Good Agricultural Practice (GAP)*** should also be formulated to control a contamination problem. When this is possible, maximum levels may be based on GMP or GAP considerations and may thus be established at a level as low as reasonably achievable. Considerations regarding the technological possibilities to control a contamination problem, e.g. by cleaning, should also be taken into account when a primary risk assessment model (theoretical maximum daily intake) shows possible intakes exceeding the toxicological maximum intake recommendation. In such a case the possibilities of lower contamination levels need further careful examination. Then a detailed study about all the aspects involved is necessary, so that decisions about maximum limits can be based on a thorough evaluation of both the public health arguments and the possibilities and problems to comply with the proposed standard.

Risk assessment and risk management considerations

A tiered approach, involving risk assessment and risk management procedures, is recommended for developing a consistent policy regarding public health risks related to contaminants in foods.

Risk assessment is defined as the scientific evaluation of the probability of occurrence of known or potential adverse health effects resulting from human exposure to foodborne hazards. The process consists of the following steps: ***hazard identification, hazard characterization, exposure assessment and risk characterization*****.** (The definition includes quantitative risk assessment, which emphasizes reliance on numerical expressions of risk, and also qualitative expressions of risk, as well as an indication of the attendant uncertainties.

The first steps are ***hazard identification*** and ***hazard characterization*****.** ***Hazard identification*** is the identification of known or potential health effects in humans, produced by a contaminant which may be present in a particular food or group of foods. ***Hazard characterization*** is the qualitative and, if possible, quantitative evaluation of the nature of the adverse effects associated with the food contaminant, including a dose/response assessment and, when possible, the establishment of a safety standard (ADI, TDI or comparable toxicological recommendation) for the intake of the contaminant. The ***exposure assessment*** is the qualitative and, when possible, quantitative evaluation of the likely intake of the contaminant via food, as well as exposure from other sources if relevant. In the ***risk characterization*** step, the hazard identification, hazard characterization and exposure assessment are combined into an estimation of the severity and occurrence of known or potential health effects likely to occur in a given population, including attendant uncertainties.

Potential public health risks can be considered to exist when there is evidence that the contaminant intake of (groups of) consumers may exceed (on a long term basis for long term recommendations) the toxicological recommendation about the maximum acceptable or tolerable intake level. More specific estimation and description of the risks will be necessary to deal adequately with cases when intakes exceeding the toxicological standard occur in practice and cannot easily be reduced. This also applies when it has not been possible to establish a safe dose level of the contaminant.

Risk management is defined as the process of weighing policy alternatives in the light of the risk assessment and, if required, to select and implement appropriate control options, including the establishment and enforcement of maximum levels of contaminants in foods. It is based on adequate risk assessment and on information about policy options and strategies to deal with contamination problems and involves ***risk communication*****.**

Risk communication is the interactive exchange of information and opinions concerning risk among risk assessors, risk managers and other interested parties. Responsible risk management is based on consistent application of an appropriate policy regarding the protection of public health, but also involves taking into account other relevant criteria, such as the available analytical data, the technological possibilities to control the contamination of products, economic factors and fair trade criteria.

In short, the risk assessment shall establish how many consumers possibly exceed the toxicological standard, and for how long time and how much, and what this implies as real health risks. Risk management involves, in a consistent way, deciding what is acceptable in this respect and what is not, to what extent other factors can be taken into account, and decisions and actions to achieve sufficient public health protection and control of the contamination.

Risk management decisions may lead to maximum levels for foods. In the process leading to such a decision, the consequences, costs and benefits should be presented and evaluated in relation to other policy options.

Establishment of maximum levels for contaminants

The ***establishment of maximum levels of contaminants in foods*** involves several principles, some of which have already been mentioned. Briefly stated, the following criteria will help in maintaining a consistent policy in this matter:

- MLs shall be set only for those contaminants that present both a significant risk to public health and a known or expected problem in international trade.

- MLs shall be set only for those foods that are significant for the total exposure of the consumer to the contaminant

- MLs shall be set as low as reasonably achievable. Providing it is acceptable from the toxicological point of view, MLs shall be set at a level which is (slightly) higher than the normal range of variation in levels in foods that are produced with current adequate technological methods, in order to avoid undue disruptions of food production and trade. Where possible, MLs shall be based on GMP and/or GAP considerations in which the health concerns have been incorporated as a guiding principle to achieve contaminant levels as low as reasonably achievable. Foods that are evidently contaminated by local situations or processing conditions that can be avoided by reasonably achievable means shall be excluded in this evaluation, unless a higher ML can be shown to be acceptable from a public health point of view and appreciable economic aspects are at stake.

- Proposals for MLs in products shall be based on data from at least various countries and sources, encompassing the main production areas/processes of those products, as far as they are engaged in international trade. When there is evidence that contamination patterns are sufficiently understood and will be comparable on a global scale, more limited data may be enough.

- MLs may be set for product groups when sufficient information is available about the contamination pattern for the whole group, or when there are other arguments that extrapolation is appropriate.

- Numerical values for MLs shall preferably be regular figures in a geometric scale (0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5 etc.), unless this may pose problems in the acceptability of the MLs.

- MLs shall apply to representative samples per lot. If necessary, appropriate methods of sampling shall be specified.

- MLs should not be lower than a level which can be analyzed with methods of analysis that can be readily applied in normal product control laboratories, unless public health considerations necessitate a lower detection limit which can only be controlled by means of a more elaborate method of analysis. In all cases, however, a validated method of analysis should be available with which a ML can be controlled.

- The contaminant as it should be analyzed and to which the ML applies should be clearly defined. The definition may include important metabolites when this is appropriate from an analytical or toxicological point of view. It may also be aimed at indicator substances which are chosen from a group of related contaminants.

- The product as it should be analyzed and to which the ML applies, should be clearly defined. In general, MLs are set on primary products. MLs shall in general preferably be expressed as a level of the contaminant related to the product as it is, on a fresh weight basis. In some cases, however, there may be valid arguments to prefer expression on a dry weight basis. Preferably the product shall be defined as it moves in trade, with provisions where necessary for the removal of inedible parts that might disturb the preparation of the sample and the analysis. The product definitions used by the

CCPR and contained in the Classification of foods and feeds may serve as guidance on this subject; other product definitions should only be used for specified reasons. For contaminant purposes, however, analysis and consequently MLs will preferably be on the basis of the edible part of the product.

For fat soluble contaminants which may accumulate in animal products, provisions should be applied regarding the application of the ML to products with various fat content (comparable to the provisions for fat soluble pesticides).

- Guidance is desirable regarding the possible application of MLs established for primary products to processed products and multi-ingredient products. When products are concentrated, dried or diluted, use of the concentration or dilution factor is generally appropriate in order to be able to obtain a primary judgement of the contaminant levels in these processed products. The maximum contaminant concentration in a multi-ingredient food can likewise be calculated from the composition of the food. Information regarding the behaviour of the contaminant during processing (e.g. washing, peeling, extraction, cooking, drying etc.) is however desirable to give more adequate guidance here. When contaminant levels are consistently different in processed products related to the primary products from which they are derived, and sufficient information is available about the contamination pattern, it may be appropriate to establish separate maximum levels for these processed products. This also applies when contamination may occur during processing. In general however, maximum levels should preferably be set for primary agricultural products and may be applied to processed, derived and multi-ingredient foods by using appropriate factors. When these factors are sufficiently known, they should be added to the data base about the contaminant and mentioned in connection to the maximum level in a product.

- MLs shall preferably not be set higher than is acceptable in a primary (theoretical maximum intake and risk estimation) approach of their acceptability from a public health point of view. When this poses problems in relation to other criteria for establishing MLs, further evaluations are necessary regarding the possibilities to reduce the contaminant levels, e.g. by improving GAP and/or GMP conditions. When this does not bring a satisfactory solution, further refined risk assessment and contaminant risk management evaluations will have to be made in order to try to reach agreement about an acceptable ML.

Procedure for risk assessment in relation to (proposed) MLs for contaminants

It will be evident that in the case of contaminants, it is more difficult to control food contamination problems than in the case of food additives and pesticide residues. Proposed MLs will inevitably be influenced by this situation. In order to promote acceptance of Codex contaminant MLs, it is therefore important that assessments of the acceptability of those MLs are done in a consistent and realistic way. The procedure involves assessment of the dietary intake in relation to the proposed or existing MLs and the maximally acceptable intake from the toxicological point of view.

For pesticide residues, Guidelines (WHO, 1989, revised 1995) have been prepared for predicting the dietary intake, involving a two-tiered approach with increasingly realistic predictions of intake. In the crude estimate phase, hypothetical global and cultural diets are used to calculate the theoretical maximum daily intake (TMDI) (based on proposed or existing MRLs). The best estimate involves the national dietary pattern and corrections for residue losses during transport, storage, food preparation, for known residue level in foods as consumed, etc. It is recommended to be cautious in using other than average food consumption values, although it is considered appropriate to use relevant average food consumption data for identifiable subgroups of the population. The procedure is used to assess the acceptability of proposed MRLs and to promote international acceptance of Codex MRLs.

For contaminants and natural toxins in food, essentially the same procedure is used. Food consumption patterns with a higher intake of critical foods may be used in the intake calculations when this is part of an accepted national or international health protection and risk management policy. A harmonized approach using an appropriate intake estimation model that is as realistic as possible is recommended. Calculated data should where possible always be compared with measured intake data. Proposals for Codex MLs should be accompanied by intake calculations and risk assessment conclusions regarding their acceptability and use. Statements from Governments about the (non-acceptance of (proposed) Codex MLs should refer to specified intake calculations and risk management conclusions which support this position.

ANNEX II

PROCEDURE FOR RISK MANAGEMENT DECISIONS

Introduction

The recommended procedure for risk management decisions in the CCFAC is presented here as a simple decision scheme based on the main criteria, mentioned in the Preamble, I.4.2. Criterion (1), basic information about the contaminant (problem) is not further mentioned, because it is considered a prerequisite, without which no sensible discussion can take place, hazard identification and characterization. Criterion (5), technological and economic aspects, is an essential tool for making recommendations about the risk management of the contaminant problem and for developing MLs, and when this information is not adequate, further data shall be requested. Bearing this in mind, it need not be further mentioned in the decision scheme, which is shown below. Decisions can be based on the availability of information (- or + or ?) on the following criteria:

(2a) Tox toxicological information,

(3) PHP potential health problems,

(2b) A/In analytical and intake data,

(4) TP international trade problems.

The question mark ? is used in the column PHP, to indicate that only toxicological information is sufficiently available, or only intake data, so that there is no sufficient basis to decide whether there are potential health problems. Obviously, in practice there will be many situations which are not so clear cut as it is presented in the scheme. Information may be considered sufficient by some, and inadequate by others. Decisions will have to be taken on a case by case basis, considering the criteria mentioned in Annex I. Further quantification of the criteria for the necessary data base for making decisions may become inevitable when serious problems are encountered in practice regarding this aspect.

Risk management decision scheme for CCFAC

Case	Criterion				CCFAC Action
	(2a) Tox	(2b) A/In	(3) PHP	(4) TP	
1.	-	+	?	-	Request Tox data/evaluation by JECFA
2.	-	+	?	+	Request Tox data/evaluation by JECFA, national risk assessment. In urgent cases, CCFAC statement
3.	+	-	?	-	Request analytical/intake data
4.	+	+	-	-	No further action
5.	+	+	-	+	Request national risk assessment. After evaluation (in urgent cases, after a preliminary assessment) a CCFAC statement
6.	+	+	+	-	Development of MLs by CCFAC
7.	+	+	+	+	Development of MLs by CCFAC, with priority (in urgent cases, if necessary, temporary MLs)

ANNEX III

FORMAT OF THE STANDARD

Introduction

The format for Schedule I shall contain the following elements:

- ***Name of the contaminant:*** symbols, synonyms, abbreviations, scientific descriptions and identification codes that are commonly used shall be mentioned, too.
- ***Codex number of the contaminant:*** number according to the list described in Annex IV.
- ***Reference to JECFA meetings*** (in which the contaminant was discussed).
- ***ADI, TDI, PTWI or similar toxicological intake recommendation:*** when the situation is complex a short statement and further references may be necessary here.
- ***Residue definition:*** definition of the contaminant as it shall be analyzed and to which the maximum level applies.
- ***List of Codex standards for the contaminant in foods:*** this list shall be composed of the following elements, in columns:
  - Classification number of food commodity or food category
  - Name of food commodity/category
  - Numerical value of maximum level
  - Suffix accompanying a ML to specify the application of the ML
  - Step in Codex procedure (only in CCFAC working documents)
  - References to documents, including references to source-directed measures or a code of practice, if appropriate
  - References to standard criteria for methods of analysis and sampling
  - Notes/remarks

When appropriate, instead of a maximum level a (note referring to a) statement regarding the contaminant in the mentioned food (category) may be inserted.

The format of Schedule II shall contain the following elements:

- ***Name of food commodity/category***
- ***Classification number of food commodity or food category***
- ***List of Codex standards for contaminants in that food commodity/category***

  This list shall be composed of the following elements, in columns:
  - Name of the contaminant
  - Numerical value of maximum level
  - Step in Codex procedure (only in CCFAC working documents)
  - References, remarks and notes (shorter than in Schedule I).
- ***Reference to a Code of practice*** *for the food, if appropriate*

ANNEX IV

ANNOTATED LIST OF CONTAMINANTS AND TOXINS

Introduction

In this Annex an annotated list is presented of the contaminants and toxins that are or have been dealt with in the CCFAC. It does not only encompass the contaminants and toxins for which Codex standards exist or are being developed, but also those for which further information is sought or about which a Codex decision has been taken.

The annotated list has the purpose of providing an overview of the situation regarding Codex decisions about this subject and to give guidance about further actions required. Therefore also relevant information and references are added to the list. The information shall comprise at least the current situation regarding the criteria that are important for the decision procedure of the CCFAC.

It is thus an active list, which needs to be regularly updated. In order to provide a structure for it and to facilitate the filing and retrieval of data, a number is assigned to the contaminants and toxins in the list.

The situation regarding contaminants and toxins is very complex and many substances are or have been the subject of scientific research and discussion regarding their occurrence in foods and their significance for human and animal health. On a national level, there are many activities, sometimes implying legal measures which may affect international trade in foods and feeds. It is obviously important for the CCFAC to take note of the developments in this field and to consider the necessity of actions. In order to obtain an overview of the situation, the CCFAC shall develop and maintain a working document in which more comprehensive information regarding contaminants and toxins in foods is presented in summary form. The document shall consist of an annotated comprehensive list of contaminants and toxins (Annex IV-A), and a collection of summarized textual information to the substances on the list, with references (Annex IV-B). Annex IV-A shall be structured according to a substance categorization system, by which code numbers can be assigned to the substances on the list, to allow logical and easy filing and presentation of data. This more comprehensive list shall be the basis for the code numbers which are used in Annex IV.

ANNEX V

FOOD CATEGORIZATION SYSTEM

Introduction

The food categorization system of the Codex General Standard for Contaminants and Toxins in Foods is constructed to perform the following functions:

It has a logical structure which enables a clear and systematic presentation of the (proposed) MLs. It contains (references to) product definitions and definitions of the part of the product which is analyzed and to which the ML refers. It contains codes for the food categories and the individual foods, so that data can be stored and retrieved in a convenient way.

To achieve as much harmonization as possible, an existing agreed categorization system is used.

The GSC uses the system which is developed in the framework of the CCPR as it is also suitable for contaminants. It is adopted for characterizing the various food and feed groups and the individual commodities. This system is especially elaborated regarding primary agricultural commodities, but needs further extension regarding processed products. Where necessary, new (sub)group codes or commodity codes are therefore introduced. These are described in Annex V-A. Annex V-A will also contain product descriptions as far as they are different from those contained in the existing system described by the CCPR.

Where appropriate and possible, the descriptive texts accompanying the food categories do or should also contain indications about the concentration or dilution factor in the processed commodities mentioned, in relation to the primary product(s) involved. In that way a first estimate can be made of the possible carry-over of contaminants from primary products to the various processed products. It has to be borne in mind however that the specific distribution of a contaminant in the primary product and the behaviour during processing is a complicating factor here. Further advice may be necessary in those cases. See also the general indications in Annex I and possible specific information mentioned in relation to the contaminant.

Description of the food categorization system of the GSC

The first part contains the categorization system as developed and maintained by the CCPR. It consists of 5 classes, covering primary food commodities of plant, resp. animal origin, primary feed commodities and processed commodities of plant, resp. animal origin. The classes are subdivided in 19 types and 93 groups, which are identified by code numbers and letters.

Reference is made to Vol. 2 of the Codex Alimentarius, section 2 (1993), in which this system is described, and to CX/PR 92/6 (in which a different kind of group numbering was introduced).

Annex V-A is the other part of the food categorization system for the GSC. It is developed and maintained by the CCFAC, and is complementary to the system described in the first part. It is mainly directed to processed, derived and multi-ingredient foods and encompasses all those types and groups and commodity descriptions that are necessary to assign food categorization codes to existing or planned Codex MLs for contaminants.

ANNEX V-A

COMPLEMENTARY FOOD CATEGORIZATION SYSTEM FOR THE GSC

Introduction

The following additions to the food categorization system described in Annex V-A will serve the need of assigning a food code number to commodities that are not covered by Annex V-A. The commodities involved are mainly processed, derived and multi-ingredient foods.

The system has been designed as a comprehensive list (on a general level), in order to be able to accommodate possible future needs.

In this phase no individual product definitions and codes are given. It seems sufficient to go no further than a type or group level in judging the acceptability of the system. The classification can be developed in further detail as the need arises.

The system used in the GSFA for food classification has been utilized as far as it is compatible with the existing Codex classification system described in Annex V-A.

See the annexed list of proposed new food categories. Some explanations are added, and also some existing related food categories, for a better insight in the proposed system.

Commodity descriptions can often be derived from existing Codex Standards.

Information regarding concentration and dilution factors, in relation to contaminant carry-over from primary products, will be added where appropriate and available.

Definitions for the part of the product that shall be analyzed and to which the ML of a contaminant will apply, that are different from existing definitions in Annex V-A, may also be mentioned in this Annex.

Class	Type	Group	Letter code	Product group description
D				**PROCESSED FOODS OF PLANT ORIGIN** *(existing)*
D	**01**			**Secondary commodities of plant origin** *(5 existing groups)*
D	01	06	TF	Treated fruit products (peeled, cut, frozen etc.) *(New proposed group; commodity codes can be derived from existing fruit codes)*
D	01	07	TV	Treated vegetable products (cleaned, cut, frozen etc.) *(New proposed group; commodity codes can be derived from existing vegetable codes)*
D	**02**			**Derived products of plant origin** *(7 existing groups)*
D	02	08	JV	Vegetable juices and purees *(New proposed group; commodity codes can be derived from the existing vegetable codes)*
D	02	09	SH	Sugars, syrups and honey *(New proposed group; commodity codes to be developed)*
D	**03**			**Manufactured foods of plant origin (multi-ingredient)** *(1 existing group)*
D	03	01	CP	Manufactured multi-ingredient cereal products (e.g. bread and other cooked cereal products) *(existing group)*
D	03	02	CB	Beverages derived from cereals (e.g. beer) *(New proposed group; commodity codes to be developed when the necessity arises)*
D	03	03	NF	Fruit nectars *(New proposed group; commodity codes can be derived from the existing fruit codes)*
D	03	04	FF	Fermented fruit beverages (wine, cider) *(New proposed group; commodity codes can be derived from the existing fruit concerned)*
D	03	05	DA	Distilled alcoholic beverages *(New proposed group; commodity codes to be developed when the need arises)*
D	03	06	FJ	Fruit jams, jellies, marmalades etc. *(New proposed group; commodity codes to be derived from the existing fruit codes)*
D	03	07	SF	Fruit chutneys and comparable preparations *(New proposed group; commodity codes to be derived from the existing fruit codes)*
D	03	08	SV	Vegetable chutneys and comparable preparations *(New proposed group; commodity codes to be derived from the existing vegetable codes)*
D	03	09	PS	Preparations from nuts, oil seeds and other seeds *(New proposed group; commodity codes to be derived from the existing product codes)*
D	03	l0	PP	Other manufactured plant products *(New proposed group; commodity codes to be developed when the need arises)*

Class	Type	Group	Letter code	Product group description
E				**PROCESSED FOODS OF ANIMAL ORIGIN** *(existing class)*
E	01			**Secondary commodities of animal origin** *(2 existing groups)*
E	01	03	MS	Secondary meat products (e.g. cooked meat) *(New proposed group; commodity codes to be derived from the existing meat codes)*
E	01	04	ES	Secondary egg products (e.g. egg powder) *(New proposed group; commodity codes to be derived from the existing egg codes)*
E	01	05	WS	Secondary fishery products (e.g., smoked fish) *(New proposed group; commodity codes to be derived from the existing fish codes)*
E	**02**			**Derived animal products of animal origin** *(4 existing groups)*
E	02	05	MC	Derived meat products (e.g. meat extract) *(New proposed group; commodity codes to be derived from existing meat codes)*
E	02	06	ED	Derived egg products (e.g. egg white, yolk) *(New proposed group; commodity codes to be derived from existing meat codes)*
E	02	07	WD	Derived fishery products *(New proposed group; commodity codes to be derived from the existing fish codes)*
E	**03**			**Manufactured food (single ingredient), animal origin** *(1 existing group)*
E	03	01	LI	Manufactured milk products (single ingredient) *(existing group)*
E	03	02	MT	Manufactured meat products (e.g. cured meat) *(New proposed group; commodity codes to be derived from existing meat codes)*
E	03	03	EM	Manufactured egg products (e.g. egg white powder) *(New proposed group; commodity codes to be derived from existing egg codes)*
E	03	04	WP	Manufactured fishery products (*New proposed group; commodity codes to be derived from existing fish codes*
E	**04**			**Manufactured food (multi-ingredient) of animal origin** *(1 existing group)*
E	04	01	LM	Manufactured milk products (multi-ingredient) *(existing group)*
E	04	02	MP	Manufactured meat products (multi-ingredient) (e.g. sausage) *(New proposed group; commodity codes to be developed in relation to commodity description)*
E	04	03	EP	Manufactured egg products (multi-ingredient) *(New proposed groups; commodity codes to be developed in relation to commodity description)*
E	04	04	WI	Manufactured fishery products (multi-ingredient) (*New proposed group; commodity codes to be derived from existing fish codes)*

Class	Type	Group	Letter code	Product group description
F				**MULTI-INGREDIENT MANUFACTURED FOODS** *(New proposed class)*
F	**01**			**Beverages (multi-ingredient)** *(New proposed type)*
F	01	01	BS	Beverages (soft drinks end comparable preparations) *(New proposed group; commodity codes to be developed when the necessity arises)*
F	01	02	BA	Alcoholic multi-ingredient beverages *(New proposed group; commodity codes to be developed when the necessity arises)*
F	**02**			**Sauces, salad dressings, soups, bouillons etc.** *(New proposed type)*
F	02	01	SP	Seasonings and condiments *(New proposed group; commodity codes to be developed when the necessity arises)*
F	02	02	PV	Vinegars (multi-ingredient) *(New proposed group; commodity codes to be developed when the necessity arises)*
F	02	03	PM	Mustards *(New proposed group; commodity codes to be developed when the necessity arises)*
F	02	04	BS	Soups and broths *(New proposed group; commodity codes to be developed when the necessity arises)*
F	02	05	ME	Sauces and comparable products *(New proposed group; commodity codes to be developed when the necessity arises)*
F	02	06	BC	Salads and sandwich spreads *(New proposed group; commodity codes to be developed when the necessity arises)*
F	**03**			**Chocolate & other confectionery** *(New proposed type)*
F	03	01	CC	Chocolate products *(New proposed group; commodity codes to be developed when the necessity arises)*
F	03	02	CS	Sugar confectionery, including nut based and comparable multi-ingredient confectionery *(New proposed group; commodity codes to be developed when the necessity arises)*
F	03	03	CG	Chewing gum *(New proposed group; commodity codes to be developed when the necessity arises)*
F	**04**			**Margarines & other multi-ingredient fatty foods** *(New proposed type)*
F	04	01	FF	Margarines > 80 % fat *(New proposed group; commodity codes to be developed when the necessity arises)*
F	04	02	LF	Margarines < 80 % fat *(New proposed group; commodity codes to be developed when the necessity arises)*

Class	Type	Group	Letter code	Product group description
F	04	03	OF	Other products based on fat emulsions *(New proposed group; commodity codes to be developed when the necessity arises)*
F	**05**			**Multi-ingredient bakery wares** *(New proposed type)*
F	05	01	BF	Fine bakery wares *(New proposed group; commodity codes to be developed when the necessity arises)*
F	05	02	BS	Savoury snacks (potato, cereal or starch base) *(New proposed group; commodity codes to be developed when the necessity arises)*
F	05	03	NS	Savoury coated nuts, other nut snacks, nut mixtures *(New proposed group; commodity codes to be developed when the necessity arises)*
F	**06**			**Multi-ingredient foods for special dietary uses** *(New proposed type)*
F	06	01	ID	Infant and follow-on formulae *(New proposed group; commodity codes to be developed when the necessity arises)*
F	06	02	CD	Weaning foods *(New proposed group; commodity codes to be developed when the necessity arises)*
F	06	03	HD	Dietetic foods intended for special medical purposes *(New proposed group; commodity codes to be developed when the necessity arises)*
F	06	04	TD	Dietetic formulae for slimming purposes and weight reduction *(New proposed group; commodity codes to be developed when the necessity arises)*
F	06	05	SD	Supplementary foods for dietetic uses *(New proposed group; commodity codes to be developed when the necessity arises)*
F	06	06	AD	Food supplements *(New proposed group; commodity codes to be developed when the necessity arises)*
G				**OTHER EDIBLE PRODUCTS** *(New proposed class)*
G	**01**			**Water, minerals and organic compounds** *(New proposed type)*
G	01	01	DW	Drinking water, mineral water, table waters *(New proposed group, commodity codes to be developed when the necessity arises)*
G	01	02	SW	Salt, salt substitutes, mineral preparations *(New proposed group; commodity codes to be developed when the necessity arises)*