

**The United Republic of Tanzania**

**The Ministry of Education Science and Technology**



**TANZANIA ATOMIC ENERGY  
COMMISSION**



**NATIONAL AND INTERNATIONAL  
STANDARDS/REQUIREMENTS FOR CONTROL OF  
RADIATION IN FOOD CHAIN MATERIAL**

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## **1. Introduction**

Control of radiation in food and drinking water is an important activity to protect human and animal health. According to the International Atomic Energy Agency Technical document TECDOC-1788 food and drinking water may contain both radionuclides of natural and artificial origin. The sources of radionuclides include:

- (a) Radionuclides of natural origin, particularly radionuclides in the uranium and thorium decay series and Potassium, all of which are present throughout the environment;
- (b) Authorized discharges from nuclear facilities and other licensed facilities: these are primarily of artificial origin, but may also be of natural origin, particularly in the case of uranium mining and processing activities;
- (c) Fallout from the testing of nuclear weapons which can stay for a considerable hundred to thousand years in the environment;
- (d) Accidental releases of radionuclides, such as occurred following the Windscale nuclear reactor fire in 1957, the Chernobyl nuclear power plant accident in 1986 and, more recently, the accident at the Fukushima Daiichi nuclear power plant in 2011. While accidental releases normally consist of radionuclides of artificial origin, some of these radionuclides also occur as radionuclides of natural origin in the environment.

Furthermore, the presence of radionuclides in food may be as a result of root uptake from the soil, direct deposition from the atmosphere onto crops or transfer through aquatic pathways. In the case of drinking water, those radionuclides that are soluble may be dissolved as water passes over or through rocks and soils. Direct deposition onto water bodies may also occur.

There are several international standards that provide guidance in relation to control of radionuclides in food and drinking water. In specific situations, requirements for the control of exposure of the public in all exposure situations have been established in IAEA Safety Standards Series No. GSR Part 3. Furthermore, international standards have been published on the derivation and use of activity concentrations of

radionuclides in food, milk and drinking water for use following a nuclear or radiological emergency; for radionuclides in drinking water other than in an emergency; and for food being traded internationally.

## **2. Standards or Requirements of Control of Radiation in food chain**

### ***2.1 National requirements as per Atomic Energy Act No. 7 of 2003***

According to Section 29, 30 and 31 of the Atomic Energy Act 2003 provide necessity for any manufacturer, importer and exporter of foodstuffs to obtain a radioactivity analysis certificate from the Commission before the said food is imported into the country or exported out of the country or distributed for human and animal consumption. Despite of being a legal requirement, the control of radiation in food chain has many reasons to ensure that the food consumed by Tanzanians is not contaminated by radiation and thus it is safe for normal use. Furthermore it is useful in ensuring that the economy of Tanzania continues to grow by protecting export markets.

The followings are the main reasons for control imported and exported food products in Tanzania:

- i. Illicit trafficking of radioactive materials and sources can cause contamination of radiation in foodstuffs or in food chain materials. Records show that we have been having cases of illicit trafficking of radioactive materials in the world and Tanzania as well.
- ii. The presence of naturally occurring radioactive materials in our soil and environment such as uranium minerals in the country. These can be used maliciously or can be absorbed by various plants or washed or dissolved into water bodies leading to fish contamination.
- iii. It is a role of the government to protect its citizens and its economy against hazards and dangerous materials and incidences including food chain contamination.
- iv. To protect the market of our products outside the country against sabotage from competitors who can find loophole of food safety issues. This also protects the country from being taken into international courts in case it is learnt that it exports contaminated food chain material to the international market.

- v. To fulfill the requirements of the Atomic Energy Act No 7 (2003) and its regulations as well as international health guidelines from World Health Organization (WHO), the World Food and Agriculture Organization (FAO) and the International Atomic Energy Agency (IAEA) and World Trade Organization (WTO).

## **2.2. International requirements/guidelines**

Tanzania is a member state of International Atomic energy Agency (IAEA), United Nations (UN), World Health Organization (WHO), Food and Agriculture Organization (FAO), World Trade Organization (WTO), International Labor Organization (ILO) and International Center for Trade (ICT). All these International Organizations aim at protecting consumers' health and ensuring fair practices in food trade.

2.2.1 A principal objective of international community is to provide guidelines for member states to adopt for protection of human health. The Code of Ethics under the Codex Alimentarius Commission provide guidelines to stop exporting countries and exporters from dumping poor-quality or unsafe food on to international markets. The general principle as in Code of Ethics for International Trade in Food, (Attachment 1). The quotes below demonstrate that although an importing country has the right to confirm the safety of the foodstuffs, it is the responsibility of an **exporting country** to ensure safety before sending to any country.

Article 1 of the code of ethics states that:

*The objective of this Code is to establish principles for the ethical conduct of international trade in food, in order to protect the health of the consumers and ensure fair practices in the food trade.*

Article 3.1 *“International trade in food should be conducted on the principle that all consumers are entitled to safe, sound and wholesome food and to protection from unfair trade practices.”*

Article 3.2 states: *No food (including re-exported food) should be in international trade which:*

- a. *has in or upon it any hazard in an amount which renders it poisonous, harmful or otherwise injurious to health, taking into account the application of risk analysis principles; or*
- b. *consists in whole or in part of any filthy, putrid, rotten, decomposed or other substance or foreign matter which renders it unfit for human consumption; or*
- c. *is adulterated; or*
- d. *is labelled or presented in a manner that is false, misleading or deceptive; or*
- e. *is prepared, processed, packaged, stored, transported or marketed under unsanitary conditions ; or*
- f. *has an expiration date, where applicable, which does not leave sufficient time for distribution in the importing country.*

Article 4 Conditional necessary for food in International trade states;

4.1 *Competent authorities involved in assuring the safety and suitability of food in international trade should apply principles of ethical conduct as mentioned in Article 3*

4.2 *Without prejudice to the rights and obligations conferred by bilateral or multilateral 2 agreements, no food, including in the context of concessional and food aid transactions, should be allowed for export or re-export which does not comply with the requirements imposed by the legislation of the exporting country, unless otherwise established by the legislation as may be in force in the importing country or explicitly accepted by the competent authorities of the importing country, taking into account the provisions of Codex standards and related texts wherever appropriate.*

4.3 *Food should not be placed in international trade for the purpose of disposing of unsafe or unsuitable food as described in 3.2.*

2.2.2 It is therefore clear that exporting country should ensure the safety of food chain material. Considering the Code of Ethics, if it happens that Tanzania exports something is harmful due to contamination from radiation, it is possible for the affected part to file a case in a court of law. The codex Alimentarius has been used by various actors in the international courts.

2.2.3 The Code of Ethics dealing with international food trade is supported by standards for Radiation Protection and Safety of Radiation. Providers of consumer products are tasked to ensure that they ensure their products are safe before availing to consumers. IAEA Safety Standard No. GSR Part 3 of 2014 (Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards) (attachment 2) requirement 33 states: -

*“Providers of consumer products shall ensure that consumer products are not made available to the public unless the justification of their use by members of the public has been approved by the government or the regulatory body, and either their use has been exempted on the basis of the criteria specified in Schedule I or their provision to the public has been authorized.”*

*“Upon receipt of a request for authorization to provide consumer products to the public, the regulatory body:*

- a) Shall require the provider of the consumer product to provide documents to demonstrate compliance with the requirements*
- b) Shall verify the assessments and the selection of parameters presented in the request for authorization;*
- c) Shall determine whether the end use of the consumer product can be exempted;*
- d) Shall authorize the provision to the public of the consumer product, where appropriate, subject to specific conditions of authorization.*

AND that

*“Providers of consumer products: Shall ensure that consumer products comply with the requirements of these Standards”*

The above requirements show that it is the responsibilities of the provider hereby referred to exporting country of consumer product to ensure the product is complies with standards.

2.2.4 In the Requirement 51 states that

*“The regulatory body or other relevant authority shall establish specific reference levels for exposure due to radionuclides in commodities such as construction materials, **food** and **feed**, and in drinking water, each of which shall typically be expressed as, or be based on, an annual effective dose to the representative person that generally does not exceed a value of about 1 mSv.”*

2.2.5 Section 3.2 of joint IAEA, WHO and FAO guidelines provides international standards to be applied for control of radionuclides in food and in drinking water in different circumstances other than nuclear or radiological emergency. The IAEA/WHO/FAO recommends criteria for radionuclides activity concentrations for food and drinking water (2016) (Attachment 3). Table 5 and 6 of the IAEA-TECDOC-1788 provides a summary of CODEX guidelines for radionuclides in food in International trade and their terminologies. Table 8 of the same TECDOC-1788 (Section 4.2) provides reference levels for radionuclides of natural origin.

2.2.6 Section 5 (6) of the IAEA-TECDOC-1788 states:

*In view of the caution used in the derivation of the activity concentrations given in the Codex guidelines, it would appear that they would also be appropriate for use within States that have been significantly affected by a nuclear emergency once the emergency has been declared ended. The use of one set of values, for international trade and in the long term within any affected State, has considerable benefit in terms of international harmonization and reassurance of the public.*

2.2.7 Section 5 (8) of the IAEA-TECDOC-1788 (attachment 4) states:

*While the Codex General Standard includes only radionuclides that are of artificial origin, there are radionuclides of **natural origin** that could potentially be used in malicious acts, thereby leading to contamination of the food chain and drinking water supplies. Such radionuclides include  $^{210}\text{Po}$  and  $^{226}\text{Ra}$ . It is envisaged that these would have only localized impacts and it is suggested that national authorities could deal with these situations on a case-by-case basis.*

2.2.8 Furthermore, the Codex Alimentarius (3<sup>rd</sup> Edition) on Food Import and Export Inspection and Certification Systems include guidelines for design, production, issuance and use of general office certificates (Attachment 5). Below we provide quotes of various sections of the Codex Alimentarius (3<sup>rd</sup> Edition) relevant to the requirements of issuing certificates in our context radioactivity analysis certificates (RAC).

#### SECTION 1 – PREAMBLE

*1. These guidelines recognize that the importing country's competent authority may, as a condition for clearance of food presented for international trade, require importers to present official certificates issued by or with the authority of the **exporting country's competent authority**.*

#### SECTION 3 – DEFINITIONS

**Certificates** are those paper or electronic documents, which describe and attest to attributes of consignments of food destined for international trade.

**Certification** is the procedure by which official certification bodies or officially recognized certification bodies provide written or equivalent assurance that food or food control systems conform to requirements. Certification of food may be, as appropriate, based on a range of inspection activities which may include continuous on-line inspection, auditing of quality assurance systems, and examination of finished products.

**Official certificates** are certificates issued by, or under the control of the **exporting country's competent authority**, including by a certifying body recognized by the competent authority to issue such certificates.

**Certifying bodies** are official certification bodies and officially recognized certification bodies.

**Certifying officers** are officers authorized or recognized, by the exporting country's competent authority, to complete and issue official certificates.

**Consignment** means a defined collection of food products normally covered by a single certificate.

#### SECTION 9 – ISSUANCE OF OFFICIAL CERTIFICATES (RESPONSIBILITY OF CERTIFYING OFFICERS, SECURITY AND PREVENTION OF FRAUD)

Principle F states that “The competent **authority of the exporting country** is ultimately responsible for any certificate it issues or authorizes to be issued.”

Furthermore the following sections provide more details:

26. If the **competent authority of the exporting country** has legislative authority to utilize third party certification bodies and has authorized a third party body to issue certificates on its behalf, the competent authority must ensure that there is adequate oversight of the third party, including auditing arrangements.

27. Certificates should normally be issued prior to the consignment to which the certificate relates leaving the control of the certifying body. Certificates may be issued while consignments are in transit to or have arrived at the country of destination only when appropriate systems of control are in place in the exporting country to support this practice and the practice is agreed to by the importing country, and when applicable, to the transiting country.

Therefore we have all reasons to ensure that our products are safe when exported to the other countries. We have provided international requirements. These sections from the Codex Alimentarius (3<sup>rd</sup> Edition) on Food Import and Export Inspection and Certification Systems confirm that certification should be from the exporting country and

it should be per consignment. Currently TAEC is therefore issuing Radioactivity Certificates to attest the safety of the consignment to be exported to various countries.

## LIST OF ATTACHMENTS<sup>1</sup>

1. Attachment 1: Extracts of Code of ethics for international trade in food including concessional and food aid transactions (CAC/RCP 20-1979).
2. Attachment 2: Extracts of IAEA Safety standard: Radiation protection and safety of radiation sources: International basic safety standards - General Safety Requirements Part 3. 2011
3. Attachment 3: Extracts of Joint, FAO and World Health Organization. Criteria for Radionuclide Activity Concentrations for Food and Drinking Water. No. IAEA-TECDOC-1788. Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture, 2016.
4. Attachment 4: Extracts of Codex general; for contaminants and toxins in food and feed (CODEX STAN 193-1995).
5. Attachment 5: Extracts of Joint FAO/WHO Codex Alimentarius Commission. (2007). Codex Alimentarius. 4<sup>th</sup> edition.

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*1 Note: links of full documents are provided in the extracts for further details of interested parties)*

# Attachments

## National requirements as per Atomic Energy Act No. 7 of 2003

29. Save as is provided for under this Act, the Commission shall, in consultation with the Tanzania Food and Drugs Authority and other competent institutions, establish a system designated for the control of radioactivity in foodstuffs.

System for the control of radioactivity in foodstuffs

30. It shall be a requirement under this Part of this Act for any manufacturer, importer and exporter of foodstuffs specified in relevant regulations to obtain a radioactivity analysis certificate from the Commission before the said food is imported into the country or exported out of the country or distributed for human and animal consumption.

Requirement for radioactivity analysis

31.-(1) The system, as established under section 29 of this Act, shall ensure that exports and imports of food is stuffs are screened or analysed for radioactive materials contamination imported into the country or exported or distributed for human and animal consumptions.

Analysis for radioactive materials contamination

(2) The Commission shall analyse and issue a radioactivity analysis certificate in respect of every food sample representing the consignment in question.

Act No. I of 2003

(3) Where the Commission is of the opinion that the foods analysed is not fit for human consumption, due to the detected high levels of radio activities, it shall forward the radioactivity analysis certificate for consideration and final decision to the Director-General of the Tanzania Food and Drugs Authority established by the Tanzania Food, Drugs and Cosmetics Act, 2003.

(4) All customs and Port authorities at all entry and exit points in collaboration with the Commission and the Tanzania Food and Drugs Authority, shall bear a responsibility to ensure compliance Of this Act.

Ref. Section 29, 30 and 31 of:

[https://www.tanzania.go.tz/egov\\_uploads/documents/The%20Atomic%20Energy%20Act,%202003.pdf](https://www.tanzania.go.tz/egov_uploads/documents/The%20Atomic%20Energy%20Act,%202003.pdf)

## International requirements/guidelines

### Attachment 1: Code of Ethics for International Trade in Food

#### ARTICLE 3 PRINCIPLES

3.1 International trade in food should be conducted on the principle that all consumers are entitled to safe, sound and wholesome food and to protection from unfair trade practices.

3.2 No food (including re-exported food) should be in international trade which<sup>1</sup>:

- a) has in or upon it any hazard in an amount which renders it poisonous, harmful or otherwise injurious to health, taking into account the application of risk analysis principles; or
- b) consists in whole or in part of any filthy, putrid, rotten, decomposed or other substance or foreign matter which renders it unfit for human consumption; or
- c) is adulterated; or
- d) is labelled or presented in a manner that is false, misleading or deceptive; or
- e) is prepared, processed, packaged, stored, transported or marketed under unsanitary conditions ; or
- f) has an expiration date, where applicable, which does not leave sufficient time for distribution in the importing country.

#### ARTICLE 4 CONDITIONS NECESSARY FOR FOOD IN INTERNATIONAL TRADE

4.1 Competent authorities involved in assuring the safety and suitability of food in international trade should apply principles of ethical conduct as mentioned in Article 3

4.2 Without prejudice to the rights and obligations conferred by bilateral or multilateral<sup>2</sup> agreements, no food, including in the context of concessional and food aid transactions, should be allowed for export or re-export which does not comply with the requirements imposed by the legislation of the exporting country, unless otherwise established by the legislation as may be in force in the importing country or explicitly accepted by the competent authorities of the importing country, taking into account the provisions of Codex standards and related texts wherever appropriate.<sup>3</sup>

4.3 Food should not be placed in international trade for the purpose of disposing of unsafe or unsuitable food as described in 3.2.

4.4 National authorities should be aware of their obligations under the International Health Regulations (2005) with regard to food safety events, including notification, reporting or verification of events to the World Health Organisation (WHO). They should also make sure that the international code of marketing of breast milk substitutes and relevant resolutions of the World Health Assembly (WHA) setting forth principles for the protection and promotion of breast-feeding be observed.

<https://www.fao.org/fao-who-codexalimentarius/codex-texts/codes-of-practice/en/>

Then search for CXC 20-1979

OR

[https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B20-1979%252FCXP\\_020e.pdf](https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B20-1979%252FCXP_020e.pdf)

OR

<https://www.taec.go.tz/wp-content/uploads/2021/12/Attachment-1-Codes-of-ethics-CAC-RCP-20-1979.pdf>

Attachment 2: IAEA Safety Standard No. GSR Part 3 of 2014 (Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards)

**Requirement 33: Consumer products**

**Providers of consumer products shall ensure that consumer products are not made available to the public unless their use by members of the public has been justified, and either their use has been exempted or their provision to the public has been authorized.**

3.138. Providers of consumer products shall ensure that consumer products are not made available to the public unless the justification of their use by members of the public has been approved by the government or the regulatory body, and either their use has been exempted on the basis of the criteria specified in Schedule I or their provision to the public has been authorized.

3.139. Upon receipt of a request for authorization to provide consumer products to the public, the regulatory body:

- (a) Shall require the provider of the consumer product to provide documents to demonstrate compliance with the requirements in paras 3.138–3.144;
- (b) Shall verify the assessments and the selection of parameters presented in the request for authorization;
- (c) Shall determine whether the end use of the consumer product can be exempted;
- (d) Shall authorize the provision to the public of the consumer product, where appropriate, subject to specific conditions of authorization.

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[https://www-pub.iaea.org/MTCD/publications/PDF/Pub1578\\_web-57265295.pdf](https://www-pub.iaea.org/MTCD/publications/PDF/Pub1578_web-57265295.pdf)

OR

**Requirement 51: Exposure due to radionuclides in commodities**

**The regulatory body or other relevant authority shall establish reference levels for exposure due to radionuclides in commodities.**

5.22. The regulatory body or other relevant authority shall establish specific reference levels for exposure due to radionuclides in commodities such as construction materials, food and feed, and in drinking water, each of which shall typically be expressed as, or be based on, an annual effective dose to the representative person that generally does not exceed a value of about 1 mSv.

5.23. The regulatory body or other relevant authority shall consider the guideline levels for radionuclides in food traded internationally that could contain radioactive substances as a result of a nuclear or radiological emergency, which have been published by the Joint Food and Agriculture Organization of the United Nations/World Health Organization Codex Alimentarius Commission [23]. The regulatory body or other relevant authority shall consider the guideline levels for radionuclides contained in drinking water that have been published by the World Health Organization [24].

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[https://www-pub.iaea.org/MTCD/publications/PDF/Pub1578\\_web-57265295.pdf](https://www-pub.iaea.org/MTCD/publications/PDF/Pub1578_web-57265295.pdf)

OR

<https://www.taec.go.tz/wp-content/uploads/2021/12/Attachment-3-IAEA-WHO-FAO-Guideline-TECDOC-1788.pdf>

Attachment 3: IAEA/WHO/FAO TECDOC-1788 provides a summary of CODEX guidelines for radionuclides in food in International trade

## 3.2. INTERNATIONAL STANDARDS

### 3.2.1. WHO guidelines for drinking water quality

Chapter 9 of the WHO Guidelines for Drinking-water Quality [4] provides criteria with which to assess the safety of drinking water with respect to its radionuclide content. Guidance is also provided on reducing health risks by taking measures to reduce radionuclide concentrations, and therefore radiation exposures and doses, in situations where this is considered necessary. For the WHO Guidelines, which apply only in situations involving prolonged exposure, a consumption rate of two litres of drinking water per day is assumed.

The WHO Guidelines for Drinking-water Quality have been developed primarily for radionuclides of natural origin, but also apply to radionuclides of artificial origin. This is because, in principle, “human-made radionuclides are often controllable at the point at which

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[https://www-pub.iaea.org/MTCD/Publications/PDF/TE-1788\\_web.pdf](https://www-pub.iaea.org/MTCD/Publications/PDF/TE-1788_web.pdf)

OR

<https://www.taec.go.tz/wp-content/uploads/2021/12/Attachment-3-IAEA-WHO-FAO-Guideline-TECDOC-1788.pdf>

TABLE 8. REFERENCE VALUES<sup>10</sup> FOR CONCENTRATIONS OF RADIONUCLIDES IN THE URANIUM AND THORIUM SERIES IN FOODS AND DRINKING WATER [12]

Product	Concentration (Bq/kg) × 10 <sup>-3</sup>								
	<sup>238</sup> U	<sup>230</sup> Th	<sup>226</sup> Ra	<sup>210</sup> Pb	<sup>210</sup> Po	<sup>232</sup> Th	<sup>228</sup> Ra	<sup>228</sup> Th	<sup>235</sup> U
Milk products	1	0.5	5	15	15	0.3	5	0.3	0.05
Meat products	2	2	15	80	60	1	10	1	0.05
Grain products	20	10	80	50	60	3	60	3	1
Leafy vegetables	20	20	50	80	100	15	40	15	1
Roots and fruits	3	0.5	30	30	40	0.5	20	0.5	0.1
Fish products	30	10	100	200	2 000	10	ND*	100	ND*
Drinking water	1	0.1	0.5	10	5	0.05	0.5	0.05	0.04

\* ND indicates that no published data are available.

When the values in Table 8 are combined with typical consumption rates for each food group (these are also presented in reference [12]), the annual individual doses from radionuclides in the uranium and thorium series in the total diet (food and drinking water together) are 0.26 mSv, 0.2 mSv and 0.11 mSv for infants, children and adults, respectively, with a weighted mean value of 0.14 mSv. The bulk of this dose comes from the food component of the diet, with the consumption of drinking water representing about 6% of the total (see Table 9). The annual individual dose due to drinking water alone is of the order of 0.01 mSv, i.e. ten times lower than the WHO guidance level of 0.1 mSv [4]. The radionuclides which contribute the bulk of this dose are <sup>210</sup>Po, <sup>210</sup>Pb and, to a lesser extent, <sup>228</sup>Ra.

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[https://www-pub.iaea.org/MTCD/Publications/PDF/TE-1788\\_web.pdf](https://www-pub.iaea.org/MTCD/Publications/PDF/TE-1788_web.pdf)

OR

<https://www.taec.go.tz/wp-content/uploads/2021/12/Attachment-3-IAEA-WHO-FAO-Guideline-TECDOC-1788.pdf>

Attachment 4: Codex General Standard; *radionuclides*

TABLE 2

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

Radionuclide	Guideline Level (Bq/kg)		Effective dose (mSv)	
	Infant foods	Other foods	1 <sup>st</sup> year after major contamination	
			Infants	Adults
<sup>238</sup> Pu	1	10	0.08	0.1
<sup>239</sup> Pu			0.08	0.1
<sup>240</sup> Pu			0.08	0.1
<sup>241</sup> Am			0.07	0.1
<sup>90</sup> Sr	100	100	0.5	0.2
<sup>106</sup> Ru			0.2	0.04
<sup>129</sup> I			0.4	0.6
<sup>131</sup> I			0.4	0.1
<sup>235</sup> U			0.7	0.3
<sup>35</sup> S*			0.2	0.04
<sup>60</sup> Co	1000	1000	1	0.2
<sup>89</sup> Sr			0.7	0.1
<sup>103</sup> Ru			0.1	0.04
<sup>134</sup> Cs			0.5	1
<sup>137</sup> Cs			0.4	0.7
<sup>144</sup> Ce			1	0.3
<sup>192</sup> Ir	1000	10000	0.3	0.08
<sup>3</sup> H**			0.002	0.02
<sup>14</sup> C			0.03	0.3
<sup>99</sup> 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).

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<https://www.fao.org/fao-who-codexalimentarius/codex-texts/list-standards/en/>

Then search CXS 193-1995

OR

[https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B193-1995%252FCXS\\_193e.pdf](https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B193-1995%252FCXS_193e.pdf)

OR

<https://www.taec.go.tz/wp-content/uploads/2021/12/Attachment-4-CODEX-STAN-193-1995.pdf>

Attachment 5: Furthermore, the Codex Alimentarius (3<sup>rd</sup> Edition) on Food Import and Export Inspection and Certification Systems

## GUIDELINES FOR DESIGN, PRODUCTION, ISSUANCE AND USE OF GENERIC OFFICIAL CERTIFICATES<sup>1</sup>

CAC/GL 38-2001

### SECTION 1 – PREAMBLE

1. These guidelines recognize that the importing country's competent authority may, as a condition for clearance of food presented for international trade, require importers to present official certificates issued by or with the authority of the exporting country's competent authority.
2. These guidelines are not intended to encourage or mandate the use of official certificates for food presented for international trade or to diminish the trade facilitating role of commercial or other types of certificates, including third party certificates that are not issued by, or with the authority of, the government of the exporting country.
3. These guidelines recognize that while official certificates may help importing countries to achieve their objectives relating to food safety and ensuring fair practices in the food trade there may also be other approaches, which can complement or substitute for official certificates, e.g., establishment listing.

### SECTION 2 – SCOPE AND OBJECTIVES

4. These guidelines provide guidance to countries on the design, production, issuance and use of official certificates to attest that food presented for international trade has met the importing country requirements relating to food safety, and/or ensuring fair practices in the food trade.
5. These guidelines provide assistance in identifying the information and attestations that can be provided by competent authorities.
6. These guidelines are equally applicable to official certificates regardless of their mode of transmission, e.g., paper or electronic.
7. These guidelines do not deal with matters of animal and plant health unless directly related to food safety. However, it is recognized that, in practice, a single official certificate may contain information relevant to several matters (e.g., food safety and animal and plant health).

<sup>1</sup> These Guidelines should be read in conjunction with the Codex Guidelines for the Design, Operation, Assessment, and Accreditation of Food Import and Export Inspection and Certification Systems (CAC/GL 26-1997), particularly Section 7, certification systems. Reference should also be made to Codex-developed model certificates.

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Formerly Guidelines for Generic Official Certificate Formats and the Production and Issuance of Certificates.  
Adopted 2001. Revisions 2005, 2007

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<https://www.fao.org/3/a1391e/a1391e00.htm>

<https://www.taec.go.tz/wp-content/uploads/2021/12/Attachment-5-Codex-Alimentarius-3rd-edition.pdf>

## SECTION 9 – ISSUANCE OF OFFICIAL CERTIFICATES (RESPONSIBILITY OF CERTIFYING OFFICERS, SECURITY AND PREVENTION OF FRAUD)

### Principle F.

The competent authority of the exporting country is ultimately responsible for any certificate it issues or authorizes to be issued.

<sup>5</sup> The World Custom Organization classification should be used when appropriate. When species identification is needed, the Linnaeus classification should be used.

<sup>6</sup> Reference should be made to Codex standards if available.

<sup>7</sup> Quantity should be in accordance with the International System of Units (Modern Metric System).

<sup>8</sup> ISO country codes may be used.

<sup>9</sup> ISO country codes may be used.

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26. If the competent authority of the exporting country has legislative authority to utilize third party certification bodies and has authorized a third party body to issue certificates on its behalf, the competent authority must ensure that there is adequate oversight of the third party, including auditing arrangements.
27. Certificates should normally be issued prior to the consignment to which the certificate relates leaving the control of the certifying body. Certificates may be issued while consignments are in transit to or have arrived at the country of destination only when appropriate systems of control are in place in the exporting country to support this practice and the practice is agreed to by the importing country, and when applicable, to the transiting country.

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