



JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOODS

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**PROPOSED DRAFT REVISION OF THE CODE OF PRACTICE FOR THE PREVENTION AND REDUCTION OF
LEAD CONTAMINATION IN FOODS (CXC 56-2004)**

Comments¹ at Step 3 submitted by Chile, European Union (EU), Iraq, Japan, Kenya, Syrian Arab Republic, Thailand, Uganda, United States of America (USA), Zambia, Collagen Casings Trade Association (CCTA), European Cocoa Association (ECA) and International Confectionery Association (ICA)

NOTE: CCCF14 has been postponed to 3 – 7 May 2021. The comments compiled in this document will be made available to the EWG chaired by United States of America and co-chaired by United Kingdom and Japan for further consideration and preparation of a revised version of the document for consideration by CCCF14.

Background

1. This document compiles comments received through the Codex Online Commenting System (OCS) in response to CL 2020/22/OCS-CF issued in February 2020. Under the OCS, comments are compiled in the following order: general comments are listed first, followed by comments on specific paragraphs.

Explanatory notes on the appendix

2. The comments submitted through the OCS are, hereby attached as **Annex I** and are presented in table format.

¹ Comments to improve the clarity of the French or Spanish version of the provision but do not change its content are not reflected in the English version.

ANNEX I

COMMENTS ON THE PROPOSED DRAFT REVISION OF THE CODE OF PRACTICE FOR THE PREVENTION AND REDUCTION OF LEAD CONTAMINATION IN FOODS (CXC 56-2004)

GENERAL COMMENTS	MEMBER/OBSERVER
<p>Chile welcomes the opportunity to provide comments on the draft review of the Code of practice for the prevention and reduction of lead contamination in foods (CXC 56-2004). Chile reviewed the recommendations in this circular letter and has the following comments to make:</p> <p>Chile agrees with the changes offered in the draft and supports their progress.</p>	Chile
<p>Mixed Competence Member States Vote</p> <p>The EUMS would like to share the following comments:</p> <p>Paragraphs 4, 6, 7, 10, 12, 18, 20, 46, 47, 52: This code of practice mentions uses of lead, which have been phased out over the last decades. This includes leaded gasoline, lead-soldered cans, lead foil capsules on wine bottles, the use of lead arsenate as a pesticide. Therefore, it would be appropriate to add a chapter with “phased out uses” to highlight that these uses should not occur anymore, but that there might be remaining environmental contamination from these uses or remaining products on the market like very old wines.</p> <p>The EUMS support the proposed draft revision of the code of practice.</p>	EU
<p>We agree with proposed draft revision of the code of practice without any comments.</p>	Iraq
<p>Japan supports advancement of the draft revised COP to Step5 after the following editorial amendments are incorporated.</p>	Japan
<p>Approval</p>	Syrian Arab Republic
<p>Uganda appreciates work done, the code will be helpful in the industry and as a guidance in regulation as well.</p>	Uganda
<ul style="list-style-type: none"> • The United States supports advancement of the COP for adoption at Step 5/8. • The United States prepared the revisions, in close cooperation with the U.K. and Japan. • The Code of practice provides additional information on potential sources of lead in food that include lead paint, corrosion of lead pipes, damaged or unused fencing batteries, and consumption of waterfowl that have ingested lead pellets. • The Code of practice provides additional information on measures to reduce lead in food and water that include: <ul style="list-style-type: none"> ○ Securing fencing and housing for livestock ○ Considering testing soil if gardens are located in areas with potentially high lead levels ○ Adding an example of an alternative filtration method for juices, wine, and beer ○ Using an alternative water source for food preparation that does not contain lead ○ Using x-ray detection to identify and facilitate removal of lead shot 	USA
<p>The European Cocoa Association (ECA) would like to thank the chairs and members of the electronic Working Group on the development of a Draft Code of Practice for the prevention and reduction of lead contamination in foods for their work and have no further comments on the document at this stage.</p>	ECA

SPECIFIC COMMENTS	
Section/paragraph	Member/Observer
INTRODUCTION	
<p>(4) Lead contamination of food arises from numerous sources, including air and soil. Atmospheric lead from industrial pollution or leaded gasoline can contaminate food through deposition on agricultural crops. Agricultural crops can also take up lead from contaminated soil or contaminated soil may be deposited on plant surfaces. Lead contamination in soil may result from industrial pollution (e.g., mining); past use or inappropriate application of pesticides, fertilizers, fertilizers (including sewage sludge, or biosolids sludge and biosolids); or lead-containing ordnance stored on former munitions sites and from ammunition used in rifle or military firing. Contaminated plants and soil are, in turn, a source of contamination of livestock.</p> <p>To make the expression consistent with the text in para. 19.</p>	Japan
<p>(7) There have been worldwide efforts to reduce lead exposure from food. Such efforts have focused on implementing standards for allowable lead levels in food, food additives, and food contact substances; ending the use of lead-soldered cans; controlling lead levels in drinking water; reducing leaching from lead-containing vessels or restricting their use for decorative purposes; and identifying and reacting to additional sources of lead contamination in foods or dietary supplements. Although not targeted specifically at food, efforts to reduce environmental sources of lead, including restrictions on industrial emissions and restricted use of leaded gasoline, have also contributed to declining lead levels in food.</p> <p>Editorial amendment to the Spanish version.</p> <p>(7) En todo el mundo se han tomado medidas para reducir la exposición al plomo a través de los alimentos. Estas medidas se han centrado en establecer normas sobre concentraciones de plomo permitidas en alimentos, aditivos alimentarios y sustancias en contacto con los alimentos; dejar de utilizar latas soldadas con plomo; controlar la concentración de plomo en el agua potable; reducir la lixiviación de recipientes que contienen plomo o restringir su uso a fines decorativos; determinar otras fuentes de contaminación de otras fuentes de contaminación de los alimentos o complementos alimentarios por plomo y combatirlos. Aunque no se dirigen de forma específica a los alimentos, las medidas para reducir las fuentes medioambientales de plomo, tales como las restricciones de las emisiones industriales y restricción del uso de gasolina con plomo, han contribuido también a disminuir las concentraciones de plomo en los alimentos.</p>	CCTA
RECOMMENDED PRACTICES BASED ON GOOD AGRICULTURAL PRACTICES (GAP) AND GOOD MANUFACTURING PRACTICES (GMP)	
1.2 Agricultural	
Thailand is of the view that most practices in this section are relevant to planting and livestock. Also, Thailand suggests to add recommended practices to prevent and reduce lead contamination which is relevant to aquaculture.	Thailand
<p>(11) Agricultural lands near industrial facilities, roadways, and ordnance depots, rifle ranges and military firing ranges may have higher lead levels in soils than more isolated lands. Sources of. Land near buildings with weathered exterior paint also may have high lead on agricultural lands should be removed levels, including vehicle batteries; damaged or unused electric fencing batteries; and old, discarded vehicles and machinery; there is a particular concern when such buildings are situated near livestock or small gardens.</p> <p>(12) Sources of lead on agricultural lands should be removed, including vehicle batteries; damaged or unused electric fencing batteries; and old, discarded vehicles and machinery. Use of lead solder and other lead materials for repairing farming equipment should be avoided. Land near buildings with weathered exterior paint also may have high lead levels, and there is a particular concern when such buildings are situated near livestock or small gardens.</p> <p>Japan suggests reorganization of paras 11 and 12.</p> <p>New para. 11 should refer only to matters related to agricultural land contamination from the surrounding environment.</p>	Japan

SPECIFIC COMMENTS	
Section/paragraph	Member/Observer
<p><i>(18) Farmers should avoid using lands that have been treated with lead arsenate pesticide, such as former orchards, to grow crops that may accumulate lead internally (e.g., root crops) or on their surface (e.g., leafy vegetables).</i></p> <p>Paras from 18 through 21 describe pre-harvest practices of farmers while paras 22 and 23 describe post-harvest practices.</p> <p>Paras 24 and 26 refer to pre-harvest practices while para 25 refers to home, community or small-scale commercial gardeners' practice. Therefore, Japan proposes to transfer paras 24 and 26 to immediately after para. 21.</p>	Japan
<p><i>(19) Fertilizers (including sewage sludge and biosolids) should adhere to standards set by local or national authorities, and farmers should avoid growing crops on lands that have been treated with fertilizers that do not adhere to maximum allowable lead levels set by national or local authorities.</i></p> <p>Paragraph 19: also standards set by regional authorities should be mentioned.</p>	EU
<p><i>(19) Fertilizers (including sewage sludge and biosolids) should adhere to standards set by local or national or local authorities, and farmers should avoid growing crops on lands that have been treated with fertilizers that do not adhere to maximum allowable lead levels set by national or local authorities.</i></p> <p>To make the text consistent with the latter part of the same paragraph.</p>	Japan
<p><i>(21) Leafy vegetables are more vulnerable than non-leafy vegetables or root vegetables to deposition from airborne lead. Cereal grains also have been reported to absorb lead from the air at a significant rate. In areas where atmospheric lead levels are high, farmers should consider choosing crops that are less vulnerable to airborne deposition.</i></p> <p>Paras from 18 through 21 describe pre-harvest practices of farmers while paras 22 and 23 describe post-harvest practices.</p> <p>Paras 24 and 26 refer to pre-harvest practices while para 25 refers to home, community or small-scale commercial gardeners' practice. Therefore, Japan proposes to transfer paras 24 and 26 to immediately after para. 21.</p>	Japan
<p><i>(24) In areas known to have higher lead levels in soil, consider planting certain types of garden plants and trees that may be less susceptible to lead contamination from soil including fruiting vegetables, vegetables that grow on vines, and fruit trees. It may be helpful to decrease the planting of leafy and root vegetables, or to consider relocating these crops to planting localities with lower lead levels.</i></p> <p>Paras from 18 through 21 describe pre-harvest practices of farmers while paras 22 and 23 describe post-harvest practices.</p> <p>Paras 24 and 26 refer to pre-harvest practices while para 25 refers to home, community or small-scale commercial gardeners' practice. Therefore, Japan proposes to transfer paras 24 and 26 to immediately after para. 21.</p>	Japan
<p><i>(25) Home, community, or small-scale commercial gardeners should also take steps to reduce lead contamination. Avoid planting near roadways and buildings painted with lead-based paint. Consider testing soil, where practical, particularly if gardens are located in an area with potentially high lead soil levels. Good gardening practices for soils with mildly elevated lead levels include mixing organic matter into the soil, adjusting soil pH to reduce availability of lead to plants, choosing plants that are less vulnerable to lead contamination, using liners to reduce contact deposition of soil on plants, and applying mulch to reduce dust and soil splashing on plants. Some lead levels may be considered too high for gardening. It may be possible to build up gardening beds with lead-free soil in such areas and add phosphate amendments to reduce bioavailability of lead. Contaminated soil can be physically removed and replaced with clean soil. Gardeners should consult with local agricultural services, where available, for advice on what lead levels are too high for gardening, advice on how to garden safely in lead-contaminated soils, and recommended practices for disposal of removed soil.</i></p> <p>Paragraph 25: it is proposed to specify 'adjusting the soil pH' in more detail by specifying the pH and possible soil amendments to achieve this e.g. increasing the soil pH through liming.</p>	EU

SPECIFIC COMMENTS	
Section/paragraph	Member/Observer
<p>The phrase 'add phosphate amendments to reduce the bioavailability of lead' seems contradictory to paragraph 20 on avoiding the use of lead-containing phosphate fertilisers. The text should specify in more detail which phosphate amendments are recommended, in order to avoid a misinterpretation of the recommended increased use of phosphate fertilisers, as this not only can result in an increase of the lead concentrations in the soil, but also in an increase of the cadmium concentrations. In case paragraph 25 intends to recommend an increased use of phosphate fertilisers; it is proposed to delete the sentence.</p>	
<p><i>(25) Home, community, or small-scale commercial gardeners should also take steps to reduce lead contamination. Avoid planting near roadways and buildings painted with lead-based paint. Consider testing soil, where practical, particularly if gardens are located in an area with potentially high lead soil levels. Good gardening practices for soils with mildly elevated lead levels include mixing organic matter into the soil, adjusting soil pH to reduce availability of lead to plants, choosing plants that are less vulnerable to lead contamination, using liners to reduce contact deposition of soil on plants, and applying mulch to reduce dust and soil splashing on plants. Some lead levels may be considered too high for gardening. It may be possible to build up gardening beds with lead-free soil in such areas and add phosphate amendments to reduce bioavailability of lead. Contaminated soil can be physically removed and replaced with clean soil. Gardeners should consult with local agricultural services, where available, for advice on what lead levels are too high for gardening, advice on how to garden safely in lead-contaminated soils, and recommended practices for disposal of removed soil.</i></p> <p>Zambia Supports the standard, the only challenge is Laboratory capacity for the country to analyse the samples</p>	Zambia
<p><i>(26) Agricultural water for irrigation should be protected from sources of lead contamination and monitored for lead levels to prevent or reduce lead contamination of crops. For example, well water used for irrigation should be properly protected to prevent contamination and the water should be routinely monitored.</i></p> <p>Paras from 18 through 21 describe pre-harvest practices of farmers while paras 22 and 23 describe post-harvest practices. Paras 24 and 26 refer to pre-harvest practices while para 25 refers to home, community or small-scale commercial gardeners' practice. Therefore, Japan proposes to transfer paras 24 and 26 to immediately after para. 21.</p>	Japan
<p><i>(26) Agricultural water for irrigation should be protected from sources of lead contamination and monitored for lead levels to prevent or reduce lead contamination of crops. For example, well water used for irrigation should be properly protected to prevent contamination and the water should be routinely monitored.</i></p> <p>Kenya proposals a paragraph to include Agricultural water for animals to read:</p> <p style="padding-left: 40px;">Agricultural water for livestock consumption should be protected from sources of lead contamination and monitored for lead levels to prevent or reduce lead contamination of livestock products (milk, meat and eggs). For example, well water/river sources used for direct livestock consumption/farming should be properly protected to prevent contamination and the water should be routinely monitored</p>	Kenya
1.3 Drinking water	
<p>(28) National or local authorities should consider establishing allowable lead levels or appropriate treatment techniques for controlling lead levels in drinking water. The WHO has established a guideline value for maximum lead levels in drinking water of 0.01 mg/L, but some national authorities may have set lower target levels. The text has already referred to the guidelines of national authorities and WHO; therefore, it is recommended to delete the last sentence as “, but some national authorities may have set slower target levels.” The text will be read as follows:</p> <p style="padding-left: 40px;">“National or local authorities should consider establishing allowable lead levels or appropriate treatment techniques for controlling lead levels in drinking water. The WHO has established a guideline value for maximum lead levels in drinking water of 0.01 mg/L.”</p>	Thailand
1.4 Food ingredients and processing	
<p><i>(32) Food producers should limit lead in foods to levels below recommended MLs in the General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995) or standards established by national or regional local authorities for foods and food additives; this is particularly important for foods intended for infants and children.</i></p> <p>To make the term consistent with that in the other part of the document, namely, paras 10, 19, 27 and so on.</p>	Japan

SPECIFIC COMMENTS	
Section/paragraph	Member/Observer
<p>(34) Food processors should choose food and food ingredients, including ingredients used for dietary supplements, that are below the recommended MLs, or where no MLs are available, that are as low as reasonably achievable. Where feasible, they should also consider whether the land used to produce crops has been treated with lead-containing pesticides, sewage sludge, fertilizers, or biosolids <i>fertilizers (including sewage sludge and biosolids)</i>.</p> <p>To make the expression consistent with the text in para. 19.</p>	Japan
<p>(40) Food processors should examine piping within facilities to ensure that older piping is not adding lead to water supplies inside the facility, and should consider, where appropriate, replacing outdated piping, fixtures, and old containers as they may contain brass alloys and lead soldering.</p> <p>Thailand suggests to change the word “fixtures” to “fitting” for consistency with the word in Paragraph 5.</p>	Thailand
<p>(44) Because filtration aids (specifically diatomaceous earth, bentonite, and charcoal filtration) used in processing fruit juices, wines, and beer can contain lead, selecting filtration aids with lower lead levels or washing filtration aids with acidic solutions (such as ethylenediamine tetraacetic acid [EDTA] or hydrochloric acid solution) can reduce lead levels in the beverages. Alternative filtration methods also may be used, for example, ultrafiltration.</p> <p>Paragraph 44 refers to filtration aids, which are processing aids. Therefore reference should be made to the “Guidelines on substances used as processing aids ‘CAC/GL 75-2010’. and in particular it should be recommended to comply with the statement under point 3.4 of these Guidelines : Substances used as processing aids should be of food grade quality. This can be demonstrated by conforming to the applicable specifications of identity and purity recommended by the Codex Alimentarius Commission or, in the absence of such a specification, with an appropriate specification developed by responsible national or international bodies or suppliers.”</p> <p>Different types of filtration aids contain different concentration of lead for example for diatomaceous earth, the JECFA specification for lead is below 10 mg/kg and for charcoal (activated carbon) it is below 5 mg/kg. Therefore a ranking of filtration aids, according to their lead levels, should be made.</p> <p>It case that the JECFA specification is considered not strict enough to ensure low levels of lead in fruit juices, wine and beer a recommendation should be made to update the specification.</p>	EU
<p>(44) Because filtration aids (specifically diatomaceous earth, bentonite, and charcoal filtration) used in processing fruit juices, wines, and beer can contain lead, selecting filtration aids with lower lead levels or washing filtration aids with acidic solutions (such as ethylenediamine tetraacetic acid [EDTA] or hydrochloric acid solution) can reduce lead levels in the beverages. Alternative filtration methods also may be used, for example, ultrafiltration.</p>	CCTA
<p>(45) Metal detectors or x-rays can be used in slaughterhouses and fish processing facilities to detect and facilitate removal of lead shot or fishing sinkers in wild game and fish.</p> <p>Paragraph 45: Metal detectors and x-rays can be used in slaughterhouses and fish processing facilities. As the detection of lead shots in wild game is normally done at the cutting plant or in the meat processing establishment, please add also cutting plants and meat processing establishments. Furthermore it is noted that the use of metal or X-ray detectors in fish processing plants is a heavy investment to detect fishing sinkers.</p> <p>Paragraphs 45 and 63: When discussing lead shots/bullets for wild game, it should be mentioned that there will be deposits of the shots / bullets in the shooting channel in the animal and it should be recommended that this meat should be cut off and rejected.</p>	EU
<p>(45) Metal detectors or x-rays can be used in slaughterhouses and fish processing facilities to detect and facilitate removal of lead shot or fishing sinkers in wild game and fish.</p> <p>Thailand is of the view that the use of metal detectors or x-rays is not for detecting lead shot in slaughterhouses and fish processing facilities. However, they can also be used in other kinds of food. Hence, Thailand suggests adding an additional text in this paragraph as follows:</p> <p>“Metal detectors or x-rays can be used in slaughterhouses and fish processing facilities to detect and facilities removal of lead shot or fishing sinkers in wild game and fish. Metal detectors or x-rays could also be used to detect in other kinds of food.”</p>	Thailand

SPECIFIC COMMENTS	
Section/paragraph	Member/Observer
1.5 Production and use of packaging and storage products	
(46) To provide maximum protection against lead contamination, food processors should not use lead-soldered cans. FAO Paper 36 on food and nutrition, "Guidelines for can manufacturers and food canners. Prevention of metal contamination of canned foods," as well as JECFA Monograph 622 describe alternatives to lead-soldered cans including using two-piece cans (which lack side seams) rather than three-piece cans, using cementing and welding to bond seams instead of soldering, using lead-free (tin) solders, and using alternative containers, such as lead-free glass.	CCTA
(47) Where it is not feasible to avoid the use of lead-soldered cans, methods for reducing lead exposure from these cans are discussed in depth in FAO Food and Nutrition Paper 36. Lead can be released from the solder surface itself, or from solder dust or solder splashes deposited inside the can during the manufacturing process. Lead can be released from the solder surface itself, or from solder dust or solder splashes deposited inside the can during the manufacturing process. Methods for reducing splashing and dust formation include avoiding the use of excess flux, controlling exhaust over the work area to minimize dust deposition, controlling the temperature of the fluxed can body and solder, post-solder lacquering of the interior surface or interior side seams of cans, careful wiping of excess solder from finished cans, and washing soldered cans before use. For a detailed description of proper manufacturing practices with lead-soldered cans, the FAO paper should be consulted.	CCTA
1.6 Consumer practices and consideration of certain foods	
(58) Consumers should wash vegetables and fruit thoroughly to remove dust and soil that may contain lead. Removing outer leaves from leafy greens and peeling root crops can reduce lead levels. Store food and eating/cooking utensils in sealed containers or closed cabinets that protect them from falling dust. Washing hands before preparing food will also help remove any lead-contaminated dust or soil from hands. This paragraph should refer only to reducing measure of lead from surface of foods and hands by washing and removing. Japan suggests transferring the 3rd sentence "Store food and ..." on prevention measure to the next paragraph, i.e., para. 59.	Japan
(58) Consumers should wash vegetables and fruit thoroughly to remove dust and soil that may contain lead. Removing outer leaves from leafy greens and peeling root crops can reduce lead levels. Store food and eating/cooking utensils in sealed containers or closed cabinets that protect them from falling dust. Washing hands before preparing food will also help remove any lead-contaminated dust or soil from hands. Thailand is of the view that recommended practice to remove outer leaves from leafy greens may be in conflict with the concept of food security, food loss and food waste.	Thailand
(59) Consumer should store food and eating/cooking utensils in sealed containers or closed cabinet that protect them from falling dust. Consumers should avoid storing foods, particularly acidic foods or foods for infants and children, in decorative ceramic ware, lead crystal, or other containers that can leach lead. Foods should not be stored in opened lead-soldered cans or stored in reused lead-dyed bags and containers. Consumers should avoid frequent use of ceramic mugs when drinking hot beverages such as coffee or tea, unless the mugs are known to have been made with a lead glaze that is properly fired or fired with a non-lead glaze. This paragraph should refer to measures to prevent lead contamination in food and utensils from the environment and utensils. Japan suggests transferring the 3rd sentence in para. 58 to this paragraph as the first sentence.	Japan
(61) Consumers should be educated about the dangers related to geophagy (the practice of eating earth or clay) practised most commonly by children and pregnant or nursing women. A high concentration of lead has been detected in several clay-based products, known as calabash chalk, mabele, sikor and pimbpá. Pregnant or nursing women and children who tend to practice geophagy should be dissuaded from doing so.	CCTA
(62) Consumers should be educated that foods sold as traditional medicines, including herbs and spices, may be sources of lead exposure. Thailand suggests changing the word "foods sold as traditional medicines" to "food used as traditional medicines" in order to cover the scope of CCCF.	Thailand

SPECIFIC COMMENTS	
Section/paragraph	Member/Observer
<p><i>(63) Meat from game killed with lead shot (pellets) or from waterfowl that have ingested lead pellets may be a source of lead exposure. Therefore, children and women of childbearing age should reduce or avoid consumption of game killed with and containing lead shot. When hunting game intended for consumption, consider using a rifle or slug shot rather than a shotgun, as this may reduce lead contamination of the meat; although there is the potential for lead bullet fragments to remain in the game meat.</i></p> <p>Paragraphs 45 and 63: When discussing lead shots/bullets for wild game, it should be mentioned that there will be deposits of the shots / bullets in the shooting channel in the animal and it should be recommended that this meat should be cut off and rejected.</p>	EU
<p><i>(64) National or local authorities should educate people about the potential risks of consuming local specialty foods or collected wild foods (e.g., mushrooms) that could contain elevated lead levels.</i></p> <p>We, the International Confectionery Association, wish to extend our thanks to the US chair, the UK and Japan co-chairs, and EWG members for the progress made on the draft revision of the Code of Practice for the prevention and reduction of lead contamination in foods. We support the best practice initiatives being driven by this code of practice, aimed to minimize avoidable presence of lead contamination in foods.</p>	ICA