CODEX ALIMENTARIUS COMMISSION

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Food and Agriculture Organization of the United Nations

World Health Organization

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOODS

Twelfth Session
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Comments submitted by Indonesia on agenda item 9, 10, 11, 13, 14 and 15

INDONESIA

AGENDA ITEM 9 : REQUEST FOR COMMENTS AT STEP 4 ON THE PROPOSED DRAFT CODE OF PRACTICE FOR THE REDUCTION OF 3-MONOCHLOROPROPANE-1,2-DIOL ESTERS (3-MCPDE) AND GLYCIDYL ESTERS (GE) IN REFINED OILS AND PRODUCTS MADE WITH REFINED OILS, ESPECIALLY INFANT FORMULA

General Comment

Indonesia would like to appreciate USA, EU and Malaysia for preparing the draft Proposed Draft Code of Practice for the Reduction of 3-Monochloropropane-1,2-diol Esters (3-MCPDE) and Glycidyl Esters (GE) in Refined Oils and Products Made With Refined Oils, Especially Infant Formula. But before the Committee discuss further the proposed draft of COP, Indonesia considers that it is necessary that CCCF consults with CCFO regarding the (i) flow of refining processes of vegetable oil and (ii) other edible vegetable oils which can produce 3-monochloropropane-1,2-diol (MCPD) esters (3-MCPDE) and glycidyl esters (GE) to ensure that all products are covered by the COP.

Specifically with respect to infant formula, it is important to note that 3-MCPD also found in fish oils in the range of 1.5-5.5 mg/kg (R. Je˛drkiewicz, 2016). This is highly relevant with the proposed CoP, since fish oils are widely used in infant formula (including other infant and young children products).

Paragraph 26
Consider selecting oil plant varieties with low lipase activity as being one factor (e.g., for palm oil, <10 µmole fatty acid released per minute/gram dry mesocarp) in reducing formation of FFA and acylglycerol precursors.
Comment:
Indonesia proposes to delete the words inside the bracket "(e.g., for palm oil, <10 µmole fatty acid released per minute/gram dry mesocarp)" so that it will not too restrictive.

Paragraph 27
Minimize use of substances such as fertilizers, pesticides, and irrigation water that have excessive amounts of chlorine-containing compounds during cultivation to reduce chlorine absorption by the oil trees and ultimately the palm fruits.
Comment:
Indonesia proposes to rewrite para 27 as follow:
Minimize excessive use of substances containing chlorine, such as fertilizers, pesticides, and irrigation water ~~that have excessive amounts of chlorine-containing compounds~~ during cultivation to reduce chlorine absorption by the oil trees and ultimately the palm fruits.

Paragraph 28
Harvest oil palm fruit when they are at optimal ripeness. Minimize handling of the fresh fruit bunches to reduce bruising and prevent formation of FFA. Avoid using damaged or overripe fruits, which may be associated with higher 3-MCPDE and GE formation.
Comment:
Indonesia supports this paragraph

Paragraph 29
Transport oil palm fruits to oil mills as soon as possible.
Comment:

Indonesia supports this paragraph

Paragraph 31
Wash crude vegetable oil with polar solvents like chlorine-free water or water/alcohol (ethanol) mixtures to remove chlorine-containing compounds. Experimentally, washing palm fruit pulp during oil extraction with organic solvent (e.g., hexane:water (2:1 volume/volume) or isopropanol) also has been shown to remove chlorine.
Comment:
Indonesia proposes to delete 'or water/alcohol (ethanol) mixtures'

Paragraph 34
Preferentially refining crude vegetable oil with low concentrations of precursors can produce finished oils with lower levels of 3-MCPDE and GE. For palm oil, refining crude oil with <4% DAG and <2.5% FFA or <5.5% DAG and <1.5% FFA has been shown under experimental conditions to reduce formation of GE, as the level of DAG has a positive correlation with the level of FFA.
Comment:
Indonesia proposes to delete the second sentence of this paragraph. DAG and FFA usually have positive correlation, which means the higher content of DAG will lead to higher content of FFA.

Paragraph 37
During wet degumming, increasing the amount of water removed 3-MCPDE precursors in palm oil under experimental conditions.
Comment:
Indonesia would like to clarify regarding 3-MCPDE precursors mentioned in this paragraph.

Paragraph 38
Using chemical refining (i.e., neutralization) in place of physical refining can help remove precursors (e.g. chloride) and may allow for lower deodorization temperatures in vegetable oils. However, chemical refining can lead to excessive oil loss (especially for palm oil due to higher FFA levels), and may have a greater environmental impact than physical refining.
Comment:
Indonesia proposes to move this paragraph to introduction

Paragraph 42
Consider conducting deodorization of vegetable oils at reduced temperatures to decrease formation of GE. For example, it has been suggested to conduct deodorization at 190-230°C.
Comment:
Indonesia proposes to delete "For example, it has been suggested to conduct deodorization at 190-230°C."
Deodorization temperature at 190-230 will be contradictive with the information in paragraph 11 which mentioned that GE formation begins at about >200°C, and 3-MCPDE formation occurs at temperatures as low as 160-200°C.

Paragraph 46
Use of antioxidants, such as *tert*-butyl hydroquinone (TBHQ), propyl gallate (PG), and L-ascorbyl palmitate (AP), has been shown experimentally to reduce formation of 3-MCPDE in rapeseed oil during heating.
Comment:
Indonesia would like to seek a clarification on the mechanism on the use antioxidant to reduce formation of 3-MCPDE.

Paragraph 49
Use of short-path distillation (pressure: <1 mbar and temperature: 120 to 270°C) on bleached and deodorized vegetable oils can reduce acylglycerol components and levels of 3-MCPDE and GE.
Comment:
Indonesia proposes to delete the following sentence:
~~(pressure: <1 mbar and temperature: 120 to 270°C)~~

In principles, CoP should be written in a concise manner and not too restrictive, so that it will give some flexibility for the member country to develop the best possible practices to achieve the stated objective of the CoP

Paragraph 50
Treatment of refined MCT (medium-chain triglyceride) oil with one or more bases (including, carbonate, bicarbonate, hydroxide, oxide, alkoxide, amine bases, hydrides, and phosphines) converts 3-MCPDE and GE to triglycerides. This method is being tested using other vegetable oils.
Comment:
Indonesia proposes to move this paragraph to introduction

Paragragh 53
Enzymes have been shown experimentally to mitigate 3-MCPDE in refined palm oil through conversion to glycerol.
Comment:
Indonesia proposes to move this paragraph to introduction

References
R. Je¸ drkiewicz, A.Głowacz, J. Gromadzka, J. Namiesnik. 2016. Determination of 3-MCPD and 2-MCPD esters In Edible Oils, fish Oils and Lipid Fractions of Margarines Available On Polish Market. Food Control 59. 487-492.

AGENDA ITEM 10. PROPOSED DRAFT MAXIMUM LEVEL FOR TOTAL AFLATOXINS IN READY-TO-EAT PEANUTS AND ASSOCIATED SAMPLING PLAN (AT STEP 4)

Indonesia considers that Codex should establish ML of 15 µg/kg for AFT in RTE Peanuts based on JECFA assessment which concluded that enforcing a maximum limit (ML) of 10, 8 or 4 µg/kg for ready to-eat peanuts would have little further impact on dietary exposure to AFT for the general population, compared with setting an ML of 15 µg/kg. An ML of 15 µg/kg lowered the rejection rate, as compared with 10 µg/kg which will be valuable to trade value. A higher rejection rate would in turn contribute to food waste and have a negative impact on trade without a corresponding public health benefit.

AGENDA ITEM 11. PROPOSED DRAFT MAXIMUM LEVELS FOR TOTAL AFLATOXINS AND OCHRATOXIN A IN NUTMEG, CHILI AND PAPRIKA, GINGER, PEPPER AND TURMERIC AND ASSOCIATED SAMPLING PLANS (AT STEP 4)

Aflatoxin, Total (AFT)
Indonesia supports ML of 30 µg/kg for AFT in Nutmeg, Chili and Paprika, Ginger, Pepper and Turmeric.

Spices are food commodities that have low contribution in the dietary exposure. Based on JECFA 83rd Meeting Report, there are only five food commodities (maize, peanuts, rice, sorghum and wheat) each contribute more than 10% to international dietary exposure estimates for more than one Global Environment Monitoring System – Food Contamination Monitoring and Assessment Programme (GEMS/Food) cluster diets, for either total aflatoxins (AFT) or AFB1.

Ochratoxin A (OTA)
Indonesia supports ML of 20 µg/kg for OTA in Nutmeg, Chili and Paprika, Ginger, Pepper and Turmeric.

AGENDA ITEM 13 DISCUSSION PAPER ON MAXIMUM LEVEL(S) FOR HYDROCYANIC ACID IN CASSAVA AND CASSAVA-BASED PRODUCTS AND MYCOTOXIN CONTAMINATION IN THESE PRODUCTS

Indonesia proposes that the discussion paper should define the scope of cassava and cassava based products included in the proposal. The establishment of the maximum level for Hydrocyanic acid should be based on the data on the level for Hydrocyanic acid in those products.

AGENDA ITEM 14 DISCUSSION PAPER ON FUTURE WORK ON MAXIMUM LEVELS FOR LEAD FOR INCLUSION IN THE GENERAL STANDARD TOR CONTAMINANTS AND TOXINS IN FOOD AND FEED

Indonesia agrees and supports the prioritization criteria and proposed prioritization list of foods.

AGENDA ITEM 15 DISCUSSION PAPER ON AFLATOXINS AND STERIGMATOCYSTIN CONTAMINATION IN CEREALS

Indonesia supports eWG recommendation to start new work to set an ML for AFs in cereal and cereal-based products and in food for infants and small children.