CODEX ALIMENTARIUS COMMISSION E

Food and Agriculture Organization of the United Nations

World Health Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 2 **CX/CF 15/9/2-Add.1**

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOODS

Ninth Session
New Delhi, India, 16 - 20 March 2015

MATTERS REFERRED TO THE COMMITTEE BY THE CODEX ALIMENTARIUS COMMISSION AND/OR ITS SUBSIDIARY BODIES

MATTERS ARISING FROM THE COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING

ENDORSEMENT OF METHODS OF ANALYSIS AND SAMPLING AND CODEX STANDARDS

Matters for Action

35th Session of CCMAS

Sampling Plans for DON in raw cereals

1. The 7th CCCF (April 2013) agreed to forward sampling plans for DON in cereals and cereals-based products and performance criteria for methods of analysis for endorsement by CCMAS.[1]

2. The 35th CCMAS (March 2014) did not endorse the sampling plan and requested CCCF (1) to provide the rationale why the aggregate sample weight was 1-5kg; (2) to consider whether 3 increment samples is sufficient for samples not more than 50kg; and (3) to consider whether particle size should be specified for the test portion.[2]

Analytical method

3. The 7th CCCF agreed to request the advice of CCMAS on the appropriateness of the performance criteria for methods of analysis for DON to ensure consistency with the *Working Instructions for the Implementation of the Criteria Approach in Codex.*[1]

4. The 35th CCMAS noted that the proposal was consistent with criteria for methods of analysis for aflatoxins currently listed in the *General Standard for Contaminants and Toxins in Food and Feed* (CODEX STAN 193-1995), which had been endorsed before the *Guidelines for Establishing Numeric Values for Method Criteria and/or Assessing Methods for Compliance thereof* was finalized by the Committee. The Committee, noting that the method criteria for DON should be in line with the Guidelines, did not endorse the criteria proposed by CCCF and proposed alternative criteria that the Committee can endorse, for consideration by CCCF.[2]

5. The 8th CCCF (April 2014) did not discuss sampling plans and performance criteria but limited the discussion on the maximum levels for DON in cereals and cereals-based products. As it was not possible to reach agreement on the MLs, the Committee held the MLs at Step 7 for consideration at its next session. The MLs together with the associated sampling plans and performance criteria were attached to the report of the session.[3]

6. The proposed method criteria for DON in raw cereal grains (wheat, maize and barley) is reproduced in Annex I for consideration by CCCF.

7. The Committee is invited to consider this matter under Agenda Item 9.

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[1] REP13/CF, paras 60-63
[2] REP14/MAS, paras 19-22, Appendix III
[3] REP14/CF, paras 48-59, Appendix XII.

36th Session of CCMAS

Sampling plans for fumonisins (B1+B2) in maize grain and maize flour and maize meal

8. The 36th CCMAS (March 2015) did not endorse the sampling plans noting that there were several inconsistencies between the tables and text in the sampling plans. The Committee agreed to request CCCF to consider removing the inconsistencies as presented in CCMAS/CRD 25 and to present a revised version to the next session of CCMAS.[4]

9. For ease of reference, CRD 25 is reproduced in Annex II.

Analytical method for fumonisins (B1 + B2)in maize grain and maize flour and maize meal

10. The 36th CCMAS, while supporting the criteria approach, did not endorse the performance criteria for the analytical method, as these were not consistent with those given in the Procedural Manual "*Guidelines for establishing numerical values for criteria"*. The Committee agreed to request CCCF to consider all the characteristics, including LOQ and to align the values with those in the Procedural Manual.

11. Questions were raised on whether the criteria approach was appropriate for sum of components and whether it would not be more appropriate to establish performance criteria for each of the components (FB1 and FB2).

12. The CCMAS noted that the ML for fumonisins relates to total fumonisin (B1+ B2) and that analysts are required to apply the analytical characteristics on individual basis which would be sufficient for their purposes.[4]

13. The Committee is invited to consider the request from CCMAS.

[4] REP15/MAS, paras 17-20

Annex I

Proposed method criteria for DON in cereals

Provision	ML (mg/kg)	LOD	LOQ	Precision on HorRat	Minimum applicable range (mg/kg)	Recovery	Applicable methods that meet criteria	Principle
deoxynivalenol	2	0.2	0.4	≤2	1 – 3	80 – 110%		

Annex II

Inconsistencies identified by CCMAS on sampling plans for fumonisins in maize and maize products

(Proposed by the Working Group on the endorsement of methods of analysis and sampling)

Specific points to review include the following:

1. Both the Raw Grain Maize and Maize Flour and Maize Meal Tables list a specific Aggregate Sample Size, 5 kg and 1 kg, respectively. The Aggregate Sample Size is not a critical parameter and does not need to be included in these tables. However if CCCF decides to maintain the Aggregate Sample Size, it should not be stated as a target size, but as a minimum requirement (i.e. ≥ 5 kg). This will indicate that a larger aggregate sample size can be collected.
2. In Table 1 (for lots ≥ 50 tonnes) it is stated that the number of incremental samples should be 100 and the aggregate sample weight is 5 kg. However the text (para 3) states that the incremental sample weight should be approximately 100 g, which is consistent with the tables Raw Maize Grain and Maize Flour and Maize Meal. However 100 incremental samples at 100 g weight do not produce a 5 kg aggregate sample, therefore the mass or number of incremental samples or the mass of the aggregate sample must be changed. If necessary any changes should also be captured in the Raw Maize Grain and/or Maize Flour and Maize Meal tables.
3. Table 1 states that for lots of < 50 tonnes the number of incremental samples can be from 3 – 100 and references Table 2. However in Para 4 the text states “For lots less than 50 tonnes, the sampling plan must be used with 10 to 100 incremental samples…”. This discrepancy should be corrected.
4. Table 1 states that for lots < 50 tonnes the aggregate sample weight can be from 1 to 5 kg. However in Table 2 as few as 3 samples can be taken, which would mean an incremental sample of over 300 g, which is larger than the incremental samples for other lots/sublots. Is this consistent with intent of CCCF?
5. Table 1 states that for lots ≥ 50 and ≤ 300 tonnes a sublot of 100 tonnes be created. This suggestion is not possible with lots of < 100 tonnes.
6. In Table 1 the word “lots” in column 2 heading should be changed to “sublots”.
7. In Table 1 the word tonnes should be added after 500 in column 2.
8. In Table 1 and 2 the abbreviation (ton) should be removed and replaced by tonnes or “t”. Ton is generally reserved for unit of measure representing 2000 pounds.
9. In Table 1, for clarity, a unit (kg) should be added to the column heading.
10. In Table 2 the “≥” symbol in front of 0.05 should be changed to a “≤”.
11. In Table 2 the “≤” in front of 50 should be changed to “<“ to be consistent with Table 1.
12. Paragraph 3 states an approximate weight of an incremental sample when the lot is greater than 50 tonnes, but based on Para 4 and Table 2 should this be changed from 50 tonnes to 0.5 tonnes.
13. Paragraph 3 states an approximate weight of an incremental sample when the lot is greater than 50 tonnes, but there is not a suggested weight, here or elsewhere in the plan, when lots are < 50 tonnes.
14. In paragraph 3 the word “metric” before tonnes should be removed, it is redundant with the use of “tonnes”.
15. The Definition of Laboratory Sample includes “If the aggregate sample is larger than the laboratory sample(s), the laboratory sample(s) should be removed in a random manner from the aggregate sample.” Text should be added that clearly states that if/when the aggregate sample size is reduced to produce the laboratory sample, it is performed in such a way to ensure that the laboratory sample is still representative of the sublot sampled.