

CODEX COMMITTEE ON CONTAMINANTS IN FOOD
16th Session

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EU comments on

Agenda Item 7

Sampling plan for total aflatoxins in certain cereals and cereal-based products including foods for infants and young children (at Step 4)

(CL 2023/20-CF and CX/CF 23/16/7)

European Union Competence
European Union Vote

The European Union (EU) welcomes and appreciates the work done by Brazil as chair and India as co-chair of the Electronic Working Group to prepare the document CX/CF 23/16/7 related to sampling plan for total aflatoxins in certain cereal and cereal-based products including foods for infants and young children. The development of the sampling plan should take into account the possibility to harmonize the sampling plans for maize grain, flour, meal, semolina and flakes with the sampling plan for deoxynivalenol (DON) and fumonisins and the sampling plan for cereal-based foods for infants and young children with the sampling plan for DON.

The EU wishes to make the following comments:

In line with its reply to CL 2022/46-CF, the EU can in principle agree with the sampling plan for total aflatoxins in certain cereals and cereal-based products including foods for infants and young children as provided in Appendix I to CX/CF 23/16/7 on the condition that following comments are taken into account:

- For the sampling plan for total aflatoxin in maize grain, destined for further processing:
 - o Given that the aggregate sample will in most cases be 10 kg, and a laboratory sample size of 10 kg versus 5 kg significantly reduces the sampling variance, it is proposed as laboratory sample size to have ≥ 5 kg instead of 5 kg. Furthermore, given that the sample preparation variance is significantly reduced with a test portion size of 50 g compared to 25 g, 50 grams is proposed as test portion size (see table 2 in Appendix II)

- For the sampling plan for total aflatoxin in flour meal, semolina and flakes derived from maize:
 - In the line of test portion, the second mentioning of test portion is superfluous
 - In the decision rule, the level for acceptance/rejection of the lot has to be aligned with the maximum level i.e. 10 µg/kg
- For the sampling plan for total aflatoxin in husked rice:
 - Given that the aggregate sample will in most cases be 10 kg, the possibility to use the complete aggregate sample as laboratory sample should be provided and therefore it is proposed as laboratory sample size to have ≥ 5 kg instead of 5 kg
 - In the decision rule, the level for acceptance/rejection of the lot has to be aligned with the maximum level i.e. 20 µg/kg
- For the sampling plan for total aflatoxin in polished rice
 - Given that the aggregate sample will in most cases be 10 kg, the possibility to use the complete aggregate sample as laboratory sample should be provided and therefore it is proposed as laboratory sample size to have ≥ 5 kg instead of 5 kg
 - In the decision rule, the level for acceptance/rejection of the lot has to be aligned with the maximum level i.e. 5 µg/kg
- For the sampling plan for total aflatoxin in sorghum
 - Given that the aggregate sample will in most cases be 10 kg, the possibility to use the complete aggregate sample as laboratory sample should be provided and therefore it is proposed as laboratory sample size to have ≥ 5 kg instead of 5 kg
 - In the sampling plans for maize grain, husked rice and polished rice reference is made to lot mass while for sorghum reference is made to lot size. Terminology should be consistent throughout the document.
 - In the decision rule, the level for acceptance/rejection of the lot has to be aligned with the maximum level i.e. 10 µg/kg
- For the sampling plan for total aflatoxin in cereal-based food for infants and young children
 - In the decision rule, the level for acceptance/rejection of the lot has to be aligned with the maximum level i.e. 5 µg/kg

- For the sampling plan for total aflatoxin in cereal-based food for infants and young children destined for food aid programs
 - o In the decision rule, the level for acceptance/rejection of the lot has to be aligned with the maximum level i.e. 10 µg/kg

As regards the method criteria for aflatoxins in cereals (table 5 of Appendix I):

The four single aflatoxins (aflatoxin B1, B2, G1 and G2) are analysed with the same method of analysis and aflatoxin B1 is among the four aflatoxins not the most challenging compound for achieving a certain low limit of quantification.

Therefore, the EU is of the opinion that the LOD and LOQ requirement for the single aflatoxins should not depend on the assumed ratio of the concentration of the single aflatoxin in relation to the concentration of the sum of aflatoxins. Furthermore, the factor between the limit of detection (LOD) and limit of quantification (LOQ) is usually 3 and not 2.

The EU proposes therefore a single criterion for the LOQ, e.g. $LOQ \leq 0.5 * ML$. In case the ML applies to a sum of toxins, then the LOQ of the individual toxins is $\leq 0.5 * ML/n$, with n being the number of toxins included in the ML definition.

This means that the LOQ performance criterion for total aflatoxins is $\leq ML/2$ and for the single aflatoxins $\leq ML/8$ and the LOD (taking a factor of 3 instead of 2 between LOQ and LOD) the performance criterion for total aflatoxins is $\leq ML/6$ and for the single aflatoxins $\leq ML/24$.