



## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON FOOD ADDITIVES

#### Forty-fourth Session

**Hangzhou, China, 12-16 March 2012**

#### **DISCUSSION PAPER ON MECHANISMS FOR RE-EVALUATION OF SUBSTANCES BY JECFA**

(Prepared by an electronic Working Group led by Canada, with the assistance of Argentina, Australia, Brazil, Costa Rica, Dominican Republic, European Union, France, Ghana, Iran, Japan, Malaysia, Mexico, New Zealand, Norway, Peru, Poland, United States of America, FAO JECFA Secretary, WHO Joint Secretary to JECFA and JMPR, AIDGUM, CCC, CEFIC, EFLA, Food Drink Europe, IACM, ICBA, ICGA, ICGMA, IDF, IFAC, ISA, ISDI and NATCOL)

*“The first JECFA meeting, in looking ahead, envisaged, in addition to the continuing evaluation of food additives, that there would be a re-evaluation process associated with the programme on food additive safety assessment.”<sup>1</sup>*

1. At the 41<sup>st</sup> session of the Codex Committee on Food Additives (CCFA), the WHO JECFA Secretariat drew the attention of the Committee to the importance of a systematic review programme for previously reviewed compounds. The Secretariat proposed to start discussion on a mechanism for the re-evaluation of substances when changes in knowledge and scientific advancements would contribute to the assurance of the safety of food additives. The Committee noted at the time the importance of the concept of periodic review of JECFA evaluations, based on criteria such as risk, nature of the compounds, and time since the last evaluation<sup>2</sup>.

2. The 41<sup>st</sup> session of the CCFA requested the JECFA Secretariat to prepare a discussion paper on the matter for further consideration by the Committee. The JECFA Secretariat presented the paper (CX/FA 11/43/19) at the 43<sup>rd</sup> session of the CCFA. Building on that work, that session of the Committee agreed to establish an electronic working group (eWG), led by Canada, open to all Members and Observers and working in English only, with the following terms of reference<sup>3</sup>:

- i. To establish criteria to prioritize food additives for re-evaluation (taking into account the proposed criteria in the working document and those used by JMPR/CCPR);
- ii. To establish a detailed list of the 107 food colours evaluated by JECFA since 1956, organized by year of evaluation;
- iii. To compile information on these colours from members and other organizations, including from the industry producing food additives;
- iv. To establish a prioritized list of food colours based on prioritization criteria, for action by CCFA, including for consideration for re-evaluation by JECFA.

<sup>1</sup> Section 2.2 of *Principles for the Safety Assessment of Food Additives and Contaminants in Food*, Environmental Health Criteria 70, International Programme on Chemical Safety, referring to the first report from JECFA.

<sup>2</sup> ALINORM 09/32/12, paras 141-142

<sup>3</sup> REP11/FA, para. 167

3. The present report brings to the Committee for consideration the re-evaluation criteria that the eWG developed to address the first term of reference. Canada, as chair of the eWG, wishes to thank all members and observers who participated in the eWG.
4. The criteria are set out in a simple form consisting of questions and answers. The first question is to determine whether the food additive should be further considered for re-evaluation based on whether there are existing provisions for its use within Codex or there are provisions being considered in the step process. If there are no such provisions, there is no need to prioritize the additive for re-evaluation.
5. The remainder of the prioritization criteria are seven questions in three sections that address the Status of the Food Additive with JECFA, Safety Information for the Food Additive, and Intake of the Food Additive (sections A, B, and C of the form). The answer to each question is associated with a qualitative score (“Low”, “Medium”, and sometimes “High”). The highest score in each section becomes the score for that section, and the three scores from sections A, B, and C are the total score for prioritization (e.g. “High-Medium-Medium”). The total score determines the priority group into which the additive is placed according to the prioritization schedule that is at the end of the form. The groups are ranked in priority from 1 (Total score = High-High-High; Highest priority for evaluation) to 10 (Total score = Low-Low-Low; Lowest priority for re-evaluation).
6. This prioritization scheme results in prioritized groups of additives. There is no priority ranking of the additives within each group.
7. Canada, as chair of the eWG, circulated two drafts of the prioritization form for participants to review and comment on. Canada revised each draft of the form taking into consideration all the comments that were received, while retaining the emphasis on safety, before submitting to the Codex Secretariat the version that appears as Attachment 1.
8. There are two issues that are drawn to the Committee’s attention. First, while the eWG in general accepted the prioritization approach in Attachment 1, there were points upon which there was not unanimous agreement. These are:
  - i) Some participants questioned the need for the periodic re-evaluation for food additives for which no specific concerns had arisen and no request for re-evaluation had been made by a Codex member.
  - ii) Some participants preferred a quantitative scoring system, which had been presented in the first draft of the form. There was, however, more support for a qualitative scheme.
  - iii) A number of participants thought that the time since the last JECFA evaluation should not be included as a criterion (Question 1 in section A). However, there was not general disapproval of this criterion. Furthermore, the “time since the last [JECFA] evaluation” was cited as an example criterion by the 41<sup>st</sup> session of the CCFA when it noted in its report the importance of the concept of periodic review of JECFA evaluations, and the discussion paper prepared by the JECFA Secretariat specifically proposed the time since the last JECFA evaluation as a criterion.
  - iv) Several participants expressed concern about including non-toxicological studies in the criteria (questions 2 and 3 in section B) and about not limiting the time period for such studies to those that have become available since JECFA’s last evaluation of the additive. Nevertheless, consideration of non-toxicological studies was retained, as was an open timeframe for when studies have become available, since it is for JECFA to decide whether such studies are acceptable based on its current standards for safety assessment. However, the maximum score for case reports and adverse reaction reports etc. (question 3 in section B) was reduced to “Medium”, compared to a maximum score of “High” for the question that includes epidemiological studies and clinical trials (question 2 in section B), reflecting the potentially greater relevance of the latter studies.
  - v) The concept, suggested by some, that studies would be re-evaluated only if they would change JECFA’s earlier conclusions was not included in the prioritization criteria because it is for JECFA to decide whether such studies would lead to revision of its previous conclusions.

- vi) Several participants were concerned that including disappearance data would result in an overestimate of intake of the food additive (question 2 in section C). However, this criterion was retained, with reduced weighting (maximum score of “Medium”), as disappearance data may permit a rough intake estimate where better data are lacking.

9. Second, the eWG was unable to address the third and fourth terms of reference with which it was tasked. A list of food colours was circulated to eWG participants during the first comment period, together with a request for information on the colours, in accordance with the second and third terms of reference. However, no information on the colours was submitted to the eWG, and comments received from several participants indicated that it was premature to try to prioritize the colours before the criteria for re-evaluation had been established. In view of these comments, and since the work of developing the prioritization criteria was going to be extensive, it was decided that this eWG would work on developing the criteria only.

### **Recommendations**

1. The Committee consider the prioritization criteria that were developed by the eWG as presented in Attachment 1;
2. The Committee note those points that were not unanimously agreed upon (identified in (i)-(vi) of paragraph 8 above);
3. If the Committee accepts the prioritization criteria, either in their current form or as revised by the Committee, it consider establishing an eWG to continue this work by tasking it with the third and fourth terms of reference.

**Attachment 1**

**Prioritization Criteria for the Re-evaluation of Food Additives by JECFA**

<b>Food Additive Re-evaluation Prioritization Form</b>	<b>Priority:</b>
<b>Identification of Food Additive</b> (INS number, name of food additive, technological purpose)	____-____-____

<b>Pre-screening Section for Re-evaluation of a Food Additive</b>	
Are there currently one or more provisions for this additive in the Codex General Standard for Food Additives, in a Codex food standard, or in the Codex step process?	
No	= <b>Does not require re-evaluation</b>
Yes	= <b>Proceed to Section A</b>

<b>A. Status of the Food Additive with JECFA</b> <b>Score: Low, Medium, or High</b>	<b>Score</b>
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1) When was the last JECFA evaluation performed?	
≤15 years ago	= <b>Low</b>
> 15 years ago	= <b>Medium</b>

2) Since the last JECFA evaluation have there been any significant changes to the manufacturing process, or is there variability in the manufacturing process, that could affect the identity or purity of the additive, including the type and level of impurities in the food additive?	
No	= <b>Low</b>
Yes, but the change(s) or variability is (are) not expected to affect the identity or purity of the food additive	= <b>Medium</b>
Yes, the change(s) or variability may affect the identity or purity of the food additive	= <b>High</b>

<b>Total score for Status of the Food Additive with JECFA: Assign a score of Low, Medium, or High based on the highest score of Question 1 or 2</b>	
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<b>B. Safety Information for the Food Additive</b> <b>Score: Low, Medium, or High</b>	<b>Score</b>
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1) Since the last JECFA evaluation, have any new toxicological studies or reviews, conducted in accordance with scientifically accepted principles, become available?	
No	= <b>Low</b>
Yes, there are new acute, ADME, subchronic, or genotoxicity studies	= <b>Medium</b>
Yes, there are new chronic, reproductive, developmental, or special studies (e.g. neurotoxicity study) or there is an overall review of available data (including new studies)	= <b>High</b>

2) Have any concerns about the food additive been raised by non-standard toxicological studies (e.g., clinical trials, epidemiological studies, studies on behavioural effects, biological properties, low-dose mechanistic studies)?	
No	= <b>Low</b>
Yes, one or more studies suggested the potential for minor health effects, or the relevance of observed effects in human health is unclear	= <b>Medium</b>
Yes, one or more studies suggested the potential for serious health effects	= <b>High</b>

3) Have there been any case reports, adverse reaction reports, or similar reports suggesting adverse health effects in humans?	
No	= <b>Low</b>
Yes	= <b>Medium</b>

**Total Score for Safety Information for the Food Additive: Assign a score of Low, Medium, or High based on the highest score of Question 1, 2, or 3**

<b>C. Intake of the Food Additive Score: Low, Medium, or High</b>	<b>Score</b>
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1) Since the last JECFA evaluation, have intake data, dietary modelling data, or other such data become available, which suggest that intake of the food additive could exceed the JECFA ADI?	
No	= <b>Low</b>
Yes, the available data based on conservative estimates suggest that intake may exceed the JECFA ADI	= <b>Medium</b>
Yes, the available data based on actual use levels suggest that intake may exceed the JECFA ADI	= <b>High</b>

2) Since the last JECFA evaluation, have disappearance data or similar data become available that suggest increased use of the food additive in the food supply?	
No	= <b>Low</b>
Yes, the available data suggest that use of the food additive has increased or may be increasing	= <b>Medium</b>

**Total Score for Intake of the Food Additive: Assign a score of Low, Medium, or High based on the highest score of Question 1 or 2**

**Total Score for Prioritization:**  
 The total score for prioritization is decided by the score of each of the three sections (A: Status of the Food Additive with JECFA, B: Safety Information for the Food Additive, C: Intake of the Food Additive).

The prioritization schedule below shows the ten possible outcomes ranked in order of precedence. Since all three sections are weighted equally, a score of, for example, “High, Medium, Medium” could mean any of the following:  
 A = High, B = Medium, C = Medium;  
 A = Medium, B = High, C = Medium;  
 A = Medium, B = Medium, C = High.

**Prioritization Schedule:**  
 (1) High-High-High (2) High-High-Medium (3) High-High-Low  
 (4) High-Medium-Medium (5) High-Medium-Low (6) High-Low-Low  
 (7) Medium-Medium-Medium (8) Medium-Medium-Low (9) Medium-Low-Low  
 (10) Low-Low-Low

**Note:** In addition to this categorization process, there are other streams by which a substance may be added to the priority list for re-evaluation. This would include substances whose re-evaluation has specifically been requested through the working group on priorities and agreed to by CCFA. Such a request for re-evaluation could also elevate the position of a substance already on the priority list.