Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment

Minutes of the meeting held on Tuesday 4th July 2017 in Aviation House, London.

Present

Chairman:	Professor Alan Boobis	
COT Members:	Dr Phil Botham Professor Janet Cade Ms Jane Case Dr J Coulson Dr Rene Crevel Professor John Foster Dr Mark Graham Dr C Harris Dr Sarah Judge Professor Brian Lake Ms Juliet Rix Dr J Thompson Professor Faith Williams Professor M Wright	
Food Standards Agency (FSA) Secretariat:	Mr B Maycock Dr D Gott Ms C Mulholland Ms H Gbormittah Ms F Hill Dr J Shavila Ms R Acheampong Dr D Hedley Ms C Potter	FSA Scientific Secretary
Public Health England (PHE) Secretariat:	Britta Gadeberg	PHE Scientific Secretary
Assessors:	Prof Tim Gant	PHE

Officials:	Alastair McArthur	PHE
	Rachel Elsom	PHE
	Adrienne Cullum	PHE
Other Invited Experts and Contractors:	Prof P Aggett	SMCN

Contents

Announcements

1. The Chair welcomed Members and other attendees to the meeting.

2. The Chair updated the Committees on the progress of recovery of Dr Diane Benford, who had now retired from the FSA, and expressed the hope that she might be able in the near future to attend a COT meeting to enable Members to thank her in person for her contribution to the Committee.

3. The Chair reminded those attending the meeting to declare any commercial or other interests they might have in any of the agenda items.

Item 1: Apologies for absence

4. Apologies were received from Member Prof R Harrison, and from Ms Michaela Benton, HSE, and Dr Ovnair Sepai, PHE.

Item 2: Minutes from the meeting held on 16th May 2017 - TOX/MIN/2017/03

5. The Committee considered the draft minutes, including comments from both manufacturers of novel heat-not-burn tobacco products on the sections of the minutes describing their presentations. The minutes were agreed with minor amendments.

Item 3: Matters arising from the meeting held on 16th May 2017

Item 3: Matters arising from previous meetings

6. Para 8: The draft statement on risks from PBDEs in the infant diet was ready to be finalised by Chairman's action.

7. Para 10: The draft final report of the joint COT/Scientific Advisory Committee on Nutrition (SACN) paper on potassium-based replacements for salt in the diet was almost complete and would be published soon along with the accompanying statements from the COT and SACN.

8. Para 14: The finalised statement on iodine would be published shortly.

Item 4: Novel tobacco products – joint COT, COM and COC discussion (reserved business)

9. In commenting on the section of the minutes describing their presentation, one of the manufacturers had submitted some supplementary information, which was tabled. Members briefly discussed this as reserved business.

Item 4: Joint statement from the Scientific Advisory Committee on Nutrition and the Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment: Assessing the health benefits and risks of the introduction of peanut and egg into the infant diet before six months of age in the UK (Reserved Business) – TOX/2017/31

10. The Chairman declared a non-personal, non-specific interest as he was an employee of the same university as the contractors which were commissioned by the Food Standards Agency to undertake the systematic reviews which led to the formation of the working group. No other interests were declared.

11. This item was taken as reserved business.

Item 5: First draft statement on the results of the 2014 survey of metals and other elements in infant foods: TOX/2017/27

12. The Chairman declared that he had been a member of the European Food Safety Authority (EFSA) Panel on Contaminants in the Food Chain (CONTAM) which had evaluated arsenic, cadmium and lead. No other interests were declared.

13. The FSA had conducted a survey of 15 elements in the 2014 survey of metals and other elements in infant formula, commercial infant foods, and other foods (non-infant specific foods). The results of the survey provided information on the concentrations of aluminium, antimony, arsenic (including inorganic arsenic), cadmium, chromium, copper, iodine, iron, lead, manganese, mercury, nickel, selenium, tin and zinc in these foods. Estimates of dietary exposures had been calculated for each element for UK infants and young children aged 4 to 18 months using food consumption data taken from the Diet and Nutrition Survey of Infants and Young Children (DNSIYC).

14. Details of the concentration data derived from this survey, and the subsequent exposure assessments, had previously been presented to the Committee in discussion papers (TOX/2016/29) and (TOX/2017/18) at the July 2016 and March 2017 meetings, respectively. To aid the discussions, brief toxicology summaries for each of the elements surveyed were included in the papers. At the present meeting the Committee reviewed the first draft statement.

15. Members requested that some minor revisions be made to the text and that some comments should be added in the Background section of the statement to provide more detailed information on points that are relevant to some or all of the elements assessed. The Committee agreed the wordings of the conclusions, and the draft statement would be revised to reflect these. An overall conclusion was requested and would be added to the statement.

16. Members requested that a second draft statement, with tracked changes, be produced for consideration at the meeting in September 2017.

Item 6: First draft statement on potential risks from cadmium in the diet of infants aged 0 to 12 months and children aged 1 to 5 years – TOX/2017/28

17. The Chairman declared that he had been a member of the EFSA CONTAM panel that had evaluated cadmium. No other interests were declared.

18. The SACN was undertaking a review of scientific evidence that would inform the Government's dietary recommendations for infants and young children. The SACN was examining the nutritional basis of the advice. The COT was asked to review the risks of toxicity from chemicals in the diet of infants, most of which had been completed, and in young children. The reviews would identify new evidence that had emerged since the Government's recommendations were formulated, and would appraise that evidence to determine whether the advice should be revised. The recommendations covered diet from birth to age five years.

19. A discussion paper on cadmium (TOX/2017/14) was presented to the COT in March 2017. The Committee reviewed the first draft statement at this meeting.

20. Members considered whether the reduction in industrial emissions of cadmium in the UK since 1984 had resulted in a decrease in the concentrations in soil and the food chain, and thence also in UK breast milk. In response to a query Members were informed that the survey did not include foods grown on allotments. It was therefore agreed that the statement should state that only commercial foods were considered and if foods are consumed from allotments, exposures may be higher.

21. A Member pointed out that the paper seemed to suggest that inhalation was a major route of cadmium intake whereas, for the general population, ingestion in food is the major source.

22. Members considered that the COT view on the reliability of the data on occurrences in breastmilk provided by the 2004 SUREmilk pilot breast milk archive study needed clarification.

23. The Committee observed that the consumption values for breast milk, taken originally from an EFSA opinion (based on data from 20 or more years ago), were also in line with figures published by EFSA this year, based on more recent data.

24. Some editorial changes were requested. The Committee requested that the final conclusion to the paper be reworded.

25. Members requested that a second draft statement, with changes tracked, be produced for consideration at the next meeting.

Item 7: Third draft statement on potential risks from nickel in the diet of infants aged 0 to 12 months and children aged 1 to 5 years – TOX/2017/29

26. No interests were declared.

27. The COT had been asked to consider the toxicity of chemicals in the diets of infants (0 to 12 months) and young children (1 to 5 years), in support of the review by the SACN of Government recommendations on complementary and young child feeding. A scoping paper (TOX/2015/32), highlighting some of the chemicals for possible consideration was discussed by the COT in October 2015. Members concluded that a full review of the exposures from nickel should be completed.

28. A discussion paper on nickel (TOX/2016/41) and first (TOX/2017/02) and second (TOX/2017/16) draft statements were presented to the COT in December 2016, February 2017 and March 2017, respectively. The Committee reviewed the third draft statement at this meeting.

29. Minor editorial changes were requested.

30. It was agreed that the revised statement would be cleared by Chairman's action.

Item 8: Review of potential risks from mycotoxins in the diet of infants aged 0 to 12 months and children aged 1 to 5 years – TOX/2017/30

31. No interests were declared.

32. The COT had been asked to consider the toxicity of chemicals in the diets of infants (0 to 12 months) and young children (1 to 5 years), in support of the review by the SACN of Government recommendations on complementary and young child feeding.

33. A scoping paper (TOX/2015/32) “COT contribution to SACN review of complementary and young child feeding; proposed scope of work for 1-5 year old children” was reviewed by the COT in 2015. The scoping paper presented to Members at the present meeting was in response to the COT conclusion that: “Members requested that for mycotoxins, an exposure assessment should be undertaken for all those mycotoxins measured in the UK Total Diet Study (TDS) – Mycotoxin Analysis (samples had been analysed and the data were currently being processed), and from this a decision should be made as to what depth of review was required for each mycotoxin”.

34. Each mycotoxin was discussed in a separate annex that comprised an introductory section, overviews of an health-based guidance value (HBGV) or Margin of Exposure (MOE), an exposure assessment (based on concentration data measured in the mycotoxins Total Diet Study (TDS)), and risk characterisation and conclusions sections. For mycotoxins for which the EFSA or the Joint FAO/WHO Expert Committee on Food Additives (JECFA) had not produced an evaluation, an additional section covering absorption, distribution, metabolism and excretion (ADME) data and toxicity data had been included.

35. Following discussion, Members requested that detailed discussion papers be provided on ochratoxin A, T2 and HT2 toxins, cyclopiazonic acid, fusarenon-X and neosolaniol. Fusarenon-X and neosolaniol should be considered together to identify whether a group health-based guidance value should be established. Once EFSA opinions had been published on deoxynivalenol, moniliformin and diacetoxyscirpenol, the risk characterisations of these should be readdressed, with discussion papers produced, where necessary.

36. The Committee discussed the storage of food products in the home during which mycotoxin levels may increase. Members were concerned that, as a result, exposures calculated just from concentrations measured in products in the TDS might not be representative.

37. The Committee agreed that they did not need to see separate detailed discussion papers for aflatoxins, citrinin, ergot alkaloids, fumonisins, sterigmatocystin, zearalenone and nivalenol, in the view of the large margins of exposure or safety. However, these sections would require some minor revisions before being incorporated into a draft statement.

38. Members requested that a literature review be conducted for recent toxicity studies on patulin. If the recent data suggested that the health-based guidance value should be changed, then a discussion paper should be presented to the Committee.

39. All of the mycotoxins would then be incorporated into one COT statement.

40. The requested discussion papers would be provided to the Committee over the next few meetings.

Item 9: The toxicological evaluation of novel heat-not-burn tobacco products: First draft statement and follow up information from joint Committee discussion - **TOX/2017/32** (Reserved Business)

41. The Chairman declared that he was a member of the WHO Study Group on Tobacco Product Regulation (WHO TobReg) and Chair of the ISO TC126 Working Group 10 on an "Intense Smoking Regime". Professor Faith Williams declared a personal non-specific interest as her brother-in-law is a retired senior manager from British American Tobacco and in receipt of a pension. It was agreed that while Professor Williams could contribute to the discussions, she should not contribute to the conclusions.

42. The COT, with support from COM and COC, had been requested to assess the toxicological risks from novel heat-not-burn tobacco products, and to compare these risks to those from conventional cigarettes. The purpose of the assessment was to provide DH and PHE with a general opinion on the toxicological risks of these types of product, rather than a view on any specific product, and would not fulfil any regulatory function of PHE.

43. Following the presentations by PMI and BAT at the joint COT, COC and COM discussion session at the May 2017 COT meeting, a further submission of confidential data was made by one of the manufacturers and a draft statement prepared.

44. Members considered the new data that had been provided and made a number of comments on the structure and content of the draft statement. Since they contain commercially confidential information and unpublished data, the minutes had been treated as reserved and would be published in due course. Consideration of literature from independent sources would be brought to the September meeting.

Item 10: Second draft addendum to the 2013 COT statement on potential risks from vitamin A in the infant diet -TOX/2017/33

45. The COT had been asked to consider the toxicity of chemicals in the diets of infants (0 to 12 months) and young children (1 to 5 years), in support of the review by the SACN of Government recommendations on complementary and young child feeding. A scoping paper (TOX/2015/32), highlighting some of the chemicals for possible consideration for the diet of young children aged 1-5 years, had been discussed by the COT in October 2015. Members concluded that a review on the

potential risks from vitamin A in the diet of young children aged 1-5 years should be completed.

46. A discussion paper on vitamin A (TOX/2016/40) had been presented to Members in December 2016 and the first draft statement had been presented in February 2017; some minor amendments were requested. At the current meeting, a few further minor amendments were requested. Members were content for the statement to be finalised and published alongside a lay summary on the COT website.

Item 11: Paper for information: FSA Scientific Advisory Committees (SACs) update – TOX/2017/34

47. This paper had been provided for information.

Item 6: Any other business

48. The Secretariat had submitted a poster abstract for EuroTox 2017 (10th-13th September 2017) on the completed COT infant feeding work, which had been accepted. There was no other business.

Date of next meeting

Tuesday 5th September 2017 in Conference Rooms 4&5, Aviation House, 125 Kingsway, London, WC2B 6NH.