

COMMITTEE ON TOXICITY OF CHEMICALS IN FOOD, CONSUMER PRODUCTS AND THE ENVIRONMENT

T01045 - Assessment of Joint Endocrine Effects of Multi-Component Mixtures of Food Contaminants and Additives

1. Under the T01, Risk Assessment Programme, the Food Standards Agency funded a project entitled 'The Assessment of Joint Endocrine Effects of Multi-Component Mixtures of Food Contaminants and Additives' (contract number T01045). This project addressed the predictability of effects of multi-component mixtures of food additives and contaminants. Mixtures were examined in three different *in vitro* assays of relevance to endocrine disruption, and focused on the endpoints of estrogenicity and anti-androgenicity. This project included the experimental testing and mathematical modelling of over 50 mixtures containing up to 31 components.
2. The project aims were to:
 - establish whether multi-component mixtures of food additives and contaminants act together to produce estrogenic and anti-androgenic effects at levels encountered in human tissues.
 - explore whether mechanistic information about the mode of action of food contaminants can be used to predict mixture effects.
3. A draft final report of the Project is contained at Annex A.
4. Relevant data were identified in the peer-reviewed literature from PubMed (1985-current) and from the FSA and ATSDR websites. Data on 1) likely endocrine disruptor activity, 2) occurrence in food and 3) occurrence in human tissue was extracted from the literature and tabulated, This information is contained in the Appendix at Annex B.
5. Members are asked:
 - i. To comment upon the content and value of this work to the Agency
 - ii. To comment upon the quality of the project work and of the report
 - iii. To make suggestions for further research work, if appropriate.

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Draft final report of the FSA funded project, 'The Assessment of Joint Endocrine Effects of Multi-Component Mixtures of Food Contaminants and Additives' (contract number T01045).

This Annex contains pre-publication results. A copy of the final report of this work will be available from the Food Standards Agency website www.food.gov.uk in due course.

Note: The Committee were provided with a pre-publication copy of this work. This was received in confidence and will not be released when this paper becomes publicly available. The work will be submitted for publication following peer review.

**Secretariat
June 2010**

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