Request for a scientific opinion: Submission I on Skin Sensitisation Quantitative Risk Assessment for Fragrance Ingredients (QRA 2).

Commission Department requesting the Opinion: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

1. Background

Skin sensitisation is induced by exposure to certain chemicals and might lead to allergy contact dermatitis. Contact allergy to fragrance ingredients is a common, significant and relevant problem in Europe. Therefore it is a topic of high interest for consumers, industry and Regulatory Authorities.

A model for dermal sensitisation quantitative risk assessment (QRA) had been developed and implemented by the International Fragrance Association (IFRA). The methodology relied on thresholds, no effect or low effect levels, established in healthy human volunteers and/or in animal experiments. It included a set of safety factors applied for inter-individual differences, for vehicle effects and for use considerations, to derive a so-called “acceptable exposure level”. The exposure to an allergen in different product types should be below this level. The QRA has been evaluated by the Scientific Committee on Consumer Products (SCCP) in 2008 (SCCP/1153/08) which was of the opinion that:

"The model has not been validated and no strategy of validation has been suggested. There is no confidence that the levels of skin sensitizers identified by the dermal sensitization QRA are safe for the consumer."

However, the SCCP also concluded that:

"From a scientific point of view, models like the dermal sensitization QRA approach may, after refinement and validation, in the future be applicable for risk assessment of new substances to suggest a safe level of exposure prior to incorporation into products. In such cases an independent post-marketing surveillance system would be essential.

Aggregated exposures must be incorporated in the dermal sensitization QRA model. Validation must be performed employing a broad range of different chemicals and data from substantial clinical investigations."

Later in 2012, in the context of the opinion on Fragrance Allergens (SCCS/1459/11), the SCCS reiterated that:
"For substances for which there are no clinical data of concern, models such as the dermal sensitisation QRA approach may, after refinement and validation, be used to suggest a safe level of exposure prior to incorporation into products. However, aggregated exposures must be incorporated in the dermal sensitisation QRA model"

Following the SCCS opinion of 2012, the International Dialogue for the Evaluation of Allergens (IDEA) project was established to improve the risk assessment of fragrance allergens through the collaboration of academia and industry scientists together with clinicians. The IDEA project has worked on the development of the QRA, in particular focusing on reviews of the uncertainty factors and introducing dermal aggregate exposure as replacement for the original individual product exposure assessment for fragrance ingredients. This new quantitative risk assessment methodology was named QRA 2 and further developments were introduced following the critical review performed by the Joint Research Centre (JRC) in 2015. The consolidated QRA 2 was successively submitted to the Commission services in October 2016.

2. Terms of reference

(1) In light of the methodology provided, does the SCCS consider QRA 2 adequate to establish a concentration at which induction of sensitisation by a fragrance ingredient unlikely to occur?

(2) Does the SCCS have any further scientific comments with regard to the use of QRA 2 methodology to determine, in particular regarding applicability, development and improvements?

3. Deadline: October 2017

The SCCS approved this mandate at its Plenary meeting on 7 March 2017.