L’approche du « Weight of Evidence » ou Poids des données (PdD)

Ré-évaluations des additifs alimentaires selon le règlement (EC) No 1333/2008.

Pas de dossiers complet

- doses d’emploi, exposition ? (QS)
- Métabolisme
- toxicité

Informations dans la littérature scientifique

- pas d'études BPL
- pas d'études selon une ligne directrice de type OCDE
- Incertitudes:
  - caractérisation des échantillons
  - animaux (nombre, âge, poids, suivi…)
  - données …..

Contexte:

1°) Pas de données solidement étayées apportant des réponses claires

- données parcellaires
- études non BPL, selon des protocoles non officiels

2°) Données contradictoires apportant des résultats discordants

«Peser» les données:

- **leur qualité propre (intrinsèque)**: e.g. Klimisch
  - Reliability, Adequacy, Relevance, + Quantity
    - Consistent results are obtained by different investigators under a variety of circumstances,
    - The association is stronger (larger relative risk or odds ratio),
    - The association is specific, with the exposure is associated with a specific effect, and that effect is specific to the exposure,
    - Exposure occurs prior to the development of the effect (temporality),
    - The association is consistent with what is known about the chemical's effects and mechanism based on clinical or animal studies (coherence and biological plausibility),
    - A dose-response relationship is observed.
- **Leurs poids relatifs dans l'évaluation du risque sanitaire** (résultats contradictoires, jugement d'**experts**)

Gather all Relevant Information

- Handbook Literature
- Data Bases
- Read across
- (Q)SAR
- Klimisch (2), 3 & 4 score studies
- Newly Developed Test Methods in vitro, omics
- Epidemiological studies and other human data (case reports, clinical studies, data from other usages: medicine, cosmetics…)

In the case of RA of Riboflavin, the EFSA ANS Panel followed a weight of evidence approach, which considered that:

- two subchronic toxicity studies in rats, performed according to OECD guidelines, did not report any adverse effects even at the highest doses tested,
- riboflavin is naturally present in numerous food products and has a long history of safe use,
- riboflavin-5'-phosphate sodium is rapidly dephosphorylated to free riboflavin in the intestinal mucosa then metabolized using normal metabolic pathways and

Riboflavin

- The use of riboflavin and riboflavin 5-phosphate-sodium as food additives will result in an exposure above that from the regular diet but close to the Recommended Daily Allowance by the SCF and still far below the doses that were used and reported without any significant adverse effects in human studies.

The Panel concluded that the use of riboflavin (E 101i) and riboflavin-5'-phosphate sodium (E 101ii) as food additives at the currently authorised uses would not be of safety concern.

Allergie

Where the additive is a potential allergen (e.g. a protein or a peptide) or contains residues of proteins or other known potential allergenic molecules, the principles for the determination of allergenicity include:

- the investigation of structural aspects of the protein or peptide, in silico (or bioinformatics) approaches,
- IgE binding and cell-based methods,
- analytical profiling techniques
- susceptibility to thermal and/or enzymatic degradation,
- animal models.

Allergie

C’est sur la base de l’ensemble des données issues de ces diverses études que l’avis sur la possible allergénicité d’un ingrédient alimentaire sera fondé.

SC EFSA

Le Comité scientifique de l'EFSA va définir l'approche WoE, pour le domaine de la sécurité aimentaire, dans un document guide actuellement en cours d'élaboration