FDA U.S. FOOD & DRUG ADMINISTRATION

Approach to Regulatory & Safety Assessment of Food Additives and Ingredients at FDA

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Nothing to Disclose

What does it mean to be safe for use in food?

"reasonable certainty in the minds of competent scientists that the substance is not harmful under the intended conditions of its use" (21 CFR 170.3(i))

Complete certainty of absolute harmlessness not possible

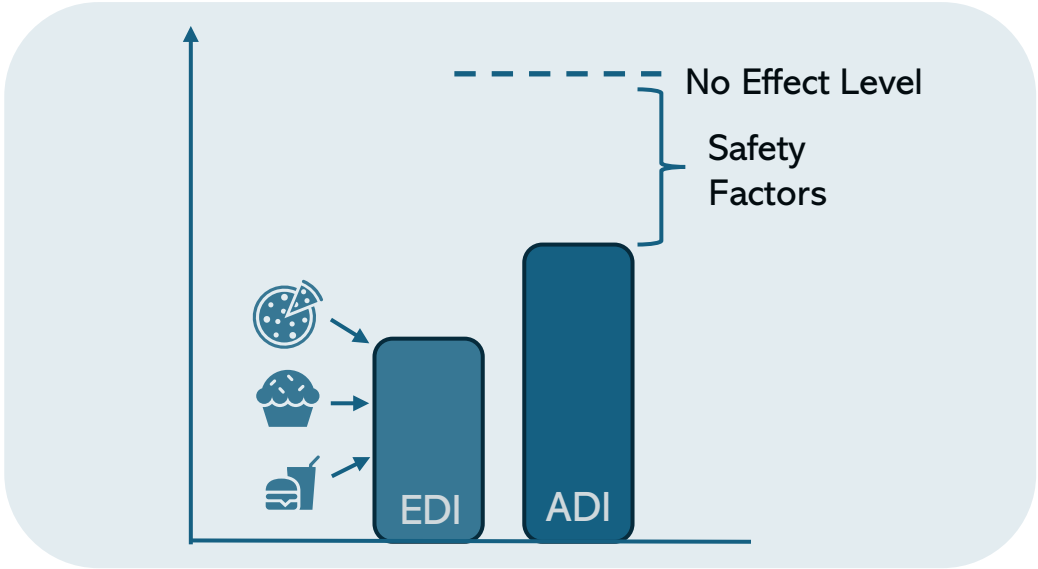
Safety determination specific to the condition of use.

Food Safety Assessment:
The role of experts

Ensuring a Reasonable Certainty of No Harm

- **What is it?**
  - Identity, properties, and composition
  - Manufacturing process
  - Levels of impurities/contaminants
- **What are its intended uses?**
  - Purpose or technical effect (why is it used)
  - Food categories or food packaging type
  - Use levels
- **How much will people consume of it?**
  - estimate based on maximum intended use levels and food consumption data
  - Cumulative exposures estimated from all authorized uses in food

- **What are the expected adverse effects?**
  - Experimental and other data to inform hazard prediction
- **At what level do adverse effects occur?**
  - Dose response data informed by guidance, expert analysis, and hazard prediction
- **What are the appropriate Safety Factors?**
  - fold adjustments to reduce the safe level, determined based on totality of data.



FD&C Act: pre-market food additive authorities

"...any substance the intended use of which results or may reasonably be expected to result, directly or indirectly, in its becoming a component or otherwise affecting the characteristics of any food..."

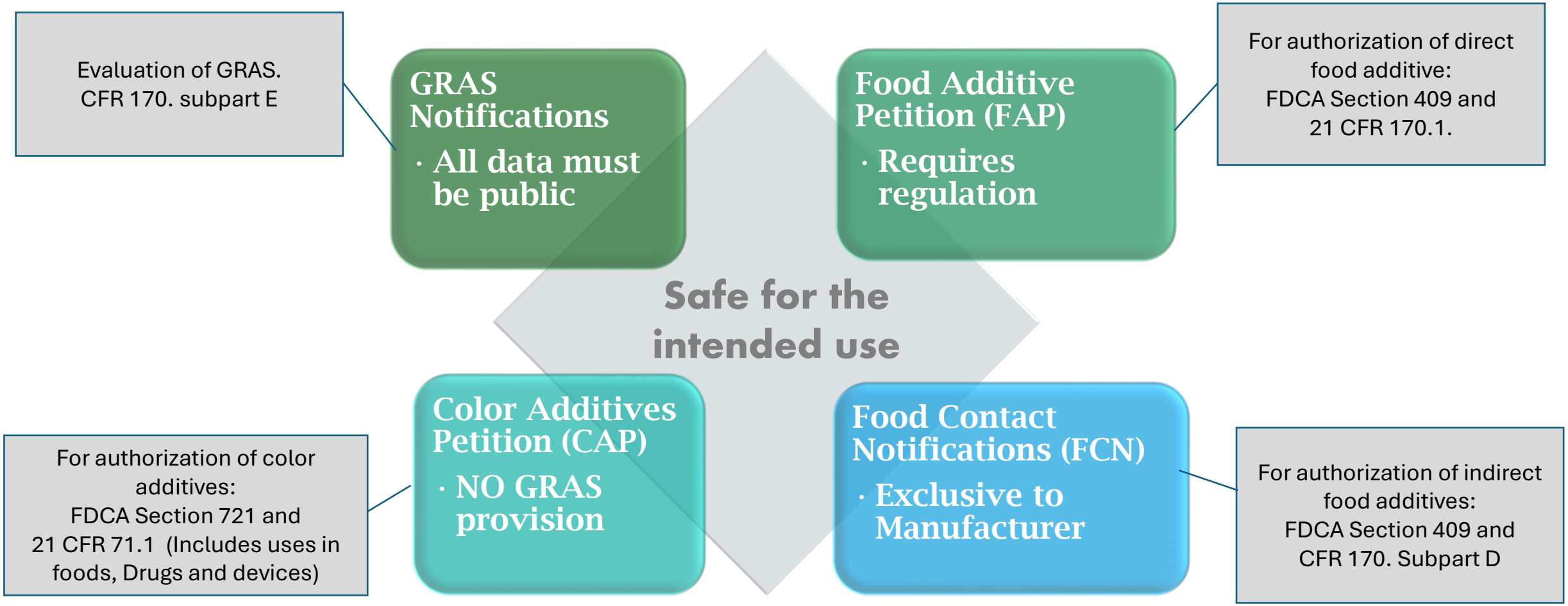
"...if such substance is not generally recognized, among experts qualified by scientific training and experience to evaluate its safety, as having been adequately shown.. to be safe under the conditions of its intended use;"

- Require authorizing regulations for additives
- Exempts generally recognized as safe (GRAS) substances

FUN FACT - The FD&C Act Section 201 defines food additives and GRAS; Section 409 outlines authorities and requirements

Additive and Ingredient Regulatory Pathways

Is a substance authorized for its use, is the use GRAS?



FDA GRAS vs. Self GRAS

FDA GRAS – Process to assist industry in ensuring it meets its requirements under the GRAS definition

- Before 1997 → voluntary GRAS petitions listed in 21 CFR 182, 184, 186.
- Late 1990s → transitions to voluntary notifications
- 2016 → FDA finalized the GRAS final rule.
- To date → FDA has evaluated and posted over 1000 GRAS Notices
- Challenge → No full positive list of all GRAS uses exists.

Self-GRAS – Industry independently concludes that the use of a substance meets the GRAS definition without notification

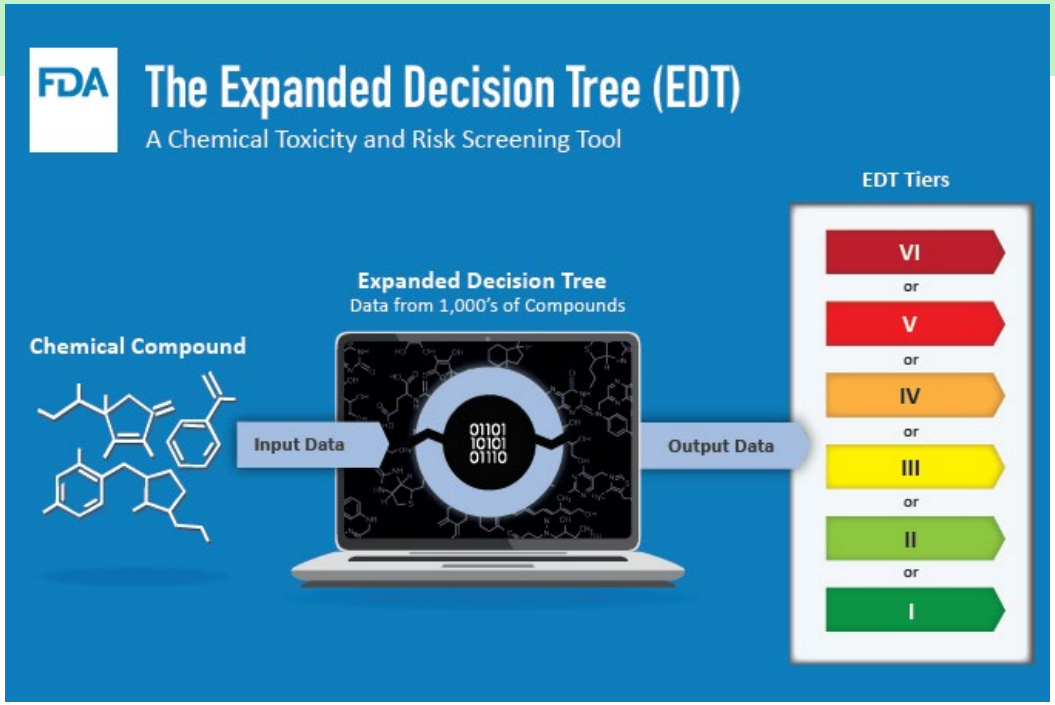
- Industry is not required to inform FDA about its GRAS conclusions
- All other FDA ingredient requirements apply
  - Safety
  - GMP
  - Labelling

Enhanced Approach

- FDA is enhancing our approach to food chemical safety, with a focus on post-market work
- Includes improved transparency and involvement of stakeholders
- Commitment to update GRAS
- Incorporating and utilizing reliable new methods

Advancing new approach methodologies (NAMs)

- FDA has had a long-standing commitment to promote the development and use of new technologies to evaluate and predict the safety, effectiveness, and reliable manufacture of regulated products.



[Expanded Decision Tree: FDA's Food Chemical Toxicity Screening Tool | FDA]

Report available on the FDA webpage

[Implementing Alternative Methods | FDA]

Thank-you