



GRAS Overview and Industry Perspectives

Priscilla Zawislak

Ashland, Inc.

International Food Additives Council

IFAC Background

The International Food Additives Council (IFAC) is a global association representing companies that produce high quality substances used worldwide as food ingredients, including food additives and GRAS substances.

www.foodadditives.org



IFAC Background (cont'd)

IFAC strives to promote science-based regulation worldwide by:

- Participating in international regulatory processes
- Establishing IFAC as a source of credible scientific information on food ingredients
- Organizing and sponsoring pertinent scientific research on food ingredients
- Defending food ingredients and industry practices



IFAC Background – Key Global Issues

- **IFAC Supports Global Harmonization of Food Ingredient Specifications**
 - Specifications for food ingredients exist in the US Code of Federal Regulations (CFR), the Codex Alimentarius (JECFA), the Food Chemicals Codex (FCC) and other national regulations
 - Concern for international trade when specifications do not coincide
 - IFAC members work very hard to ensure global harmonization of specifications through our work at Codex
- **IFAC Participation in Codex**
 - IFAC holds non-governmental organization (NGO) status before Codex
 - IFAC actively participates in the Codex Committee on Food Additives, including physical and electronic working groups
 - IFAC participates in other Codex Committees, as appropriate



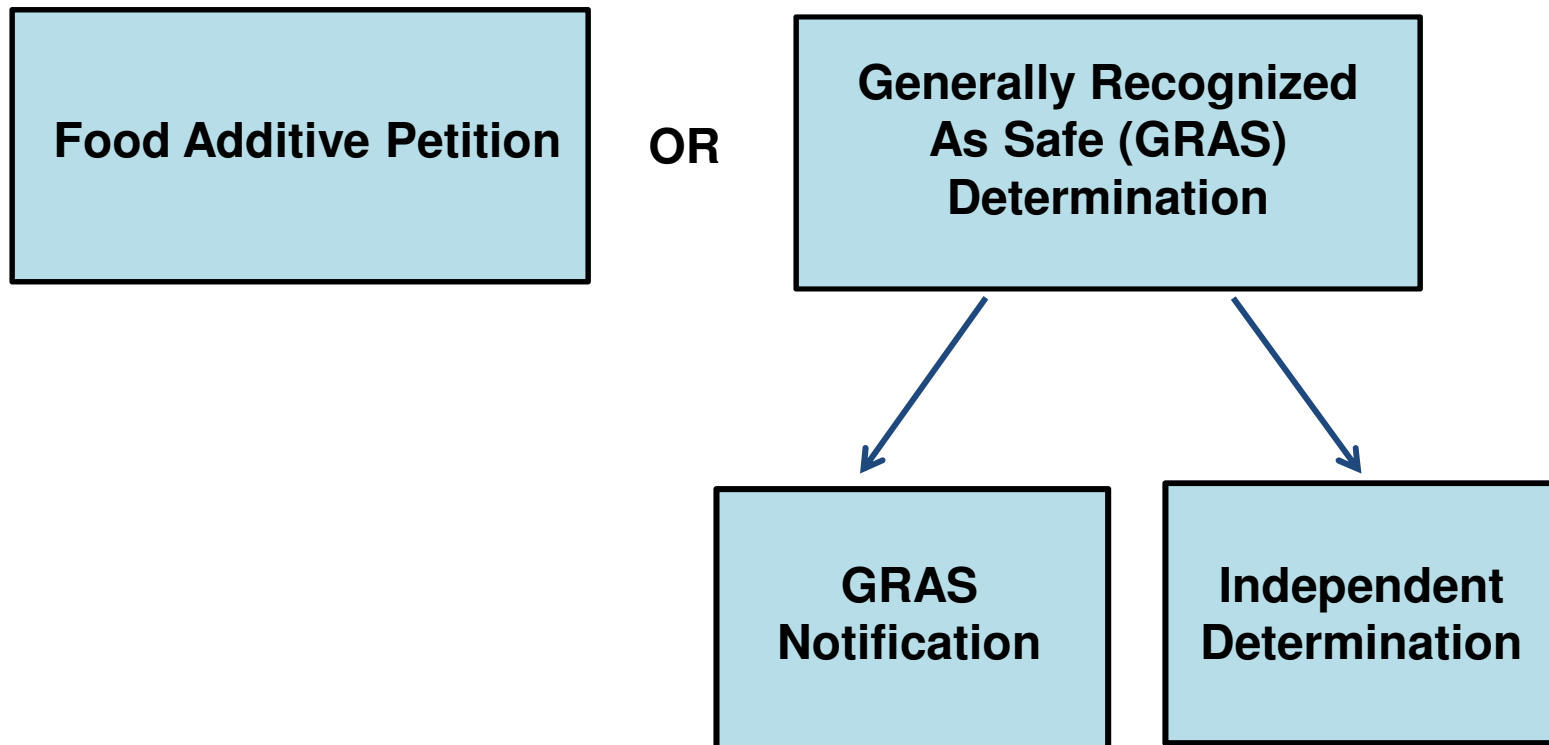
Food Additive Safety and GRAS

- **Safety Evaluation of Food Additives in the U.S.**
 - According to the FDA, the term “**safe**” means that *there is reasonable certainty in the minds of competent scientists that a substance is not harmful under intended conditions of use.*
 - According to the FDA, the term “**food additive**” refers to any *substance that 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.*
 - According to the FDA, a substance is “**Generally Recognized as Safe**” or GRAS if it is *generally recognized, among qualified experts, as having been adequately shown to be safe under the conditions of its intended use, or unless the substance is otherwise excluded from the definition of a food additive.*



Food Additive Safety and GRAS

In the US, substances are added to food through:



Food Additive Petition Process

- Typically for new substances or substances not generally recognized as safe or with a history of safe use
- Public Rulemaking Process
- Petitioner submits to U.S. FDA a food additive petition with all supporting toxicological data (publicly and privately available)
- Burden to prove safety primarily rests with U.S. FDA
- After U.S. FDA review, a notice appears in the *Federal Register* for public review/comment; includes the conditions under which the food additive may be safely used
- Once approved, food additives will appear in the *Code of Federal Regulations* (21 CFR Part 172), as a direct food additive
- Slow Process: take years



GRAS Notification Process

- Unique to the U.S.
- Manufacturer informs U.S. FDA of GRAS action and provides all supporting information (must be publicly available) without the need for rulemaking
- Burden to prove safety primarily rests with manufacturer
- More Timely and Less Burdensome on U.S. FDA
- GRAS determinations require scientific evidence of comparable quantity and quality as that needed for a Food Additive Petition
- U.S. GRAS Notice Inventory lists substances that have been notified since 1998; some GRAS substances are listed in 21 CFR Part 184



Independent GRAS Determinations

- Unique to the U.S.
- Manufacturer takes GRAS position based on common knowledge and general acceptance among qualified experts that a substance is safe
- All data to support independent determination must be publicly available
- Burden to prove safety primarily rests with manufacturer
- More Timely and Less Burdensome on U.S. FDA
- Independent GRAS determinations require scientific evidence of comparable quantity and quality as that needed for a Food Additive Petition and a GRAS notification
- IFAC member companies typically use an expert panel for safety determination



Independent GRAS Determinations

- GRAS determinations “may be based only on the views of experts qualified by scientific training and experience to evaluate the safety of substances directly or indirectly added to food.” (21 CFR 170.30)
- FDA has provided guidelines on how to submit GRAS notices, which apply to independent determinations
- Process works well for industry and U.S. FDA; not aware of any safety concerns that have arisen from this process



Value of the GRAS Process

- Targeted Use of Limited U.S. FDA Resources
 - Market-driven innovation spurs demand for substances with functional/health benefits and/or desired technological functionality
- Supports Innovation and Product Development
 - Shorter review times
 - Faster market introduction of new & innovative products to meet consumer demand for convenient & 'healthy for you' options



Food Additive Petition vs. GRAS Processes

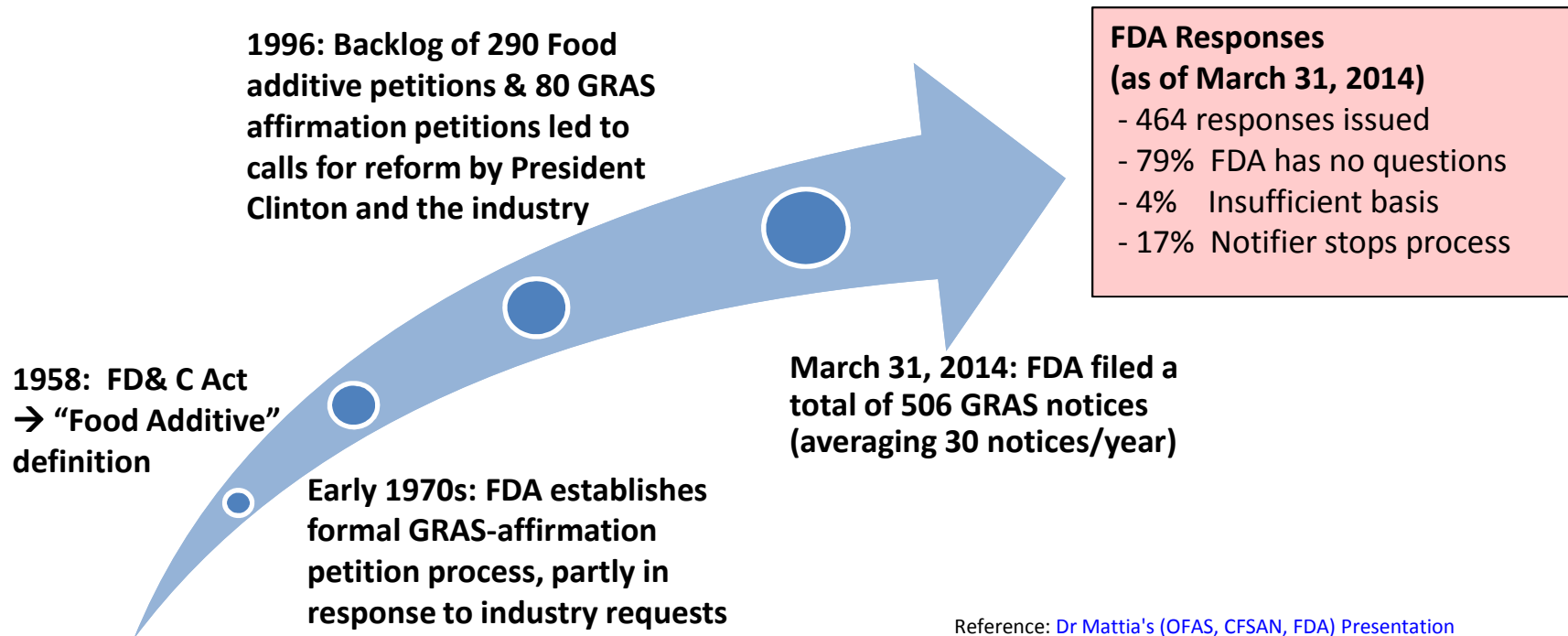
	Level of Evidence	Safety Evidence in Public Domain?	Public Rulemaking Process?	Who Makes Safety Determination?	Timing
Food Additive Petition	Same	Not Required	Yes	US FDA	Years
GRAS Notification	Same	Required	No	Submitter of Notification Uses Experts; FDA Issues No Objection Letter	Months to Get FDA's No Objection Letter
Independently-Determined GRAS	Same	Required	No	Manufacturer uses Experts or Expert Panel	Days to Months



Value of the GRAS Process

Targeted Use of Limited U.S. FDA Resources

- Market-driven innovation spurs demand for substances with functional/health benefits and/or desired technological functionality



Reference: [Dr Mattia's \(OFAS, CFSAN, FDA\) Presentation on the GRAS notification program @ FDLI, Feb 2013](#)



Value of the GRAS Process

Supports Innovation and Product Development

- Shorter review times
- Faster market introduction of new & innovative products to meet consumer demand for convenient & 'healthy for you' options

	Average time for market clearance (excludes dossier preparation time)
Food additive petition	14-18 months (expedited i.e. enhances food safety) >18 months
GRAS notification (FDA review only)	~ 180 days (6 months)
GRAS expert panel	~ 1 month

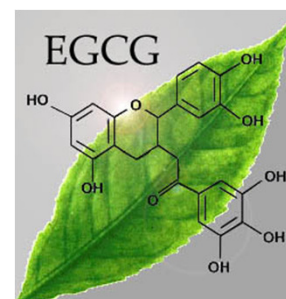


“The Making of a GRAS Substance”

- Ensuring a robust GRAS process

Identification and Characterization of the Substance

- Manufacturing Process
 - Unit operations
 - Raw Materials
- Chemically Defined vs. Natural Complexes
 - Challenges of “clean label trend
 - “Fully” characterize
- Stability
 - Reaction within food matrix
 - Breakdown of products



“The Making of a GRAS Substance”

- Ensuring a robust GRAS process

Data to Assess Safety & Support a GRAS Claim

- Determining Safe Levels of Intake
 - Literature search for all relevant information
 - ❖ Fair & balanced
 - ❖ Scope
 - Post-launch product stewardship
 - ❖ Monitor & re-evaluate
- Estimating Daily Intake/Exposure
 - Market intelligence – similar competitive products
 - ❖ Existing history of use & use levels
 - Background levels from natural sources



“The Making of a GRAS Substance”

- Ensuring a robust GRAS process

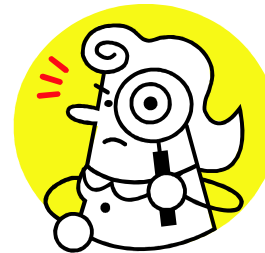
GRAS Expert Panel

- Training and Experience Qualification Standard

“FDA would normally look for such qualifications as training and experience in the relevant scientific disciplines, professional positions held, name recognition by fellow members of the scientific community and publications in respected journals in the field.”

Reference: Rulis, A and Levitt, J. FDA’S food ingredient approval process: Safety assurance based on scientific assessment. *Regulatory Toxicology and Pharmacology*. 2009 Feb; 53(1):20-31.

- Independent
 - Advisor vs. expert panel member
 - Conflict of interest assessment SOP



Concluding Remarks

- The GRAS process is well established, brings value and works well.
- GRAS determinations require scientific evidence of comparable quantity and quality as that needed for a Food Additive Petition.
- All stakeholders have a vested interest in ensuring a robust and well accepted food system, including the food additive and GRAS processes.
- The food industry has been and must continue to be diligent in shouldering their responsibility in ensuring that their products are safe, through the application of appropriate best practices and sound scientific principles.
- The food ingredient industry embraces initiatives to strengthen food safety that are based upon sound science and desires to contribute to the discussion by sharing industry specific expert knowledge and concerns.





Questions?

Thank You!

Priscilla Zawislak

Ashland, Inc.

pszawislak@ashland.com

International Food Additives Council

www.foodadditives.org

rarkin@kellencompany.com