IFIC Communications Forum
October 11, 2017

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cris.msu.edu
What is CRIS?

Center for Research on Ingredient Safety:

• Founded in 2014 to “…serve as a reliable and unbiased source for information, research, training and analysis on the safe use of chemical ingredients in consumer packaged goods…”

• A partnership between academia, government, industry, and non-governmental organizations focused on chemical-based ingredient safety

Targeted Focus Areas:

- Scientific Research (MSU)
- Risk Communication (ASU & MSU)
- Education & Training (MSU)

What is CRIS?
Preservatives

In the world of clean labels
Preservative Definition

• “Prevent food spoilage from bacteria, molds, fungi, or yeast (antimicrobials); slow or prevent changes in color, flavor, or texture and delay rancidity (antioxidants); maintain freshness”
  • US FDA
Function of Preservatives in Food

- Antimicrobial
  - Disrupt cell function of bacteria, fungi, yeast
  - Limit or stop growth and reproduction

- Antioxidant
  - Help stabilize molecules
  - Prevent deterioration
Function of Preservatives in Food

• Dependent upon
  • Food matrix
  • Light exposure
  • pH
  • Temperature
  • Storage conditions

• Usage level
  • FDA regulations
  • Upper limit often
    • < 0.1% (1000 ppm)
Preservatives

- Ascorbic acid
- BHA
- BHT
- Calcium propionate
- Calcium sorbate
- Citric acid
- EDTA
- Potassium sorbate
- Sodium benzoate
- Sodium erythorbate
- Sodium nitrite
- Tocopherols
Alternatives to Synthetic Preservatives

http://www.tandfonline.com/doi/abs/10.1080/10408398.2013.858235
Do chemicals know they are natural or synthetic?

Benzoic Acid

Sodium Benzoate
Food Safety Professional Perspective

- Decreased risk of foodborne illness
- Decreased oxidation products (not rancid)
- Extended shelf life
- Less food waste
- Shelf-stable foods
- Increased availability of foods
Consumer Perspective
Food additives—an unending controversy

http://ajcn.nutrition.org/content/46/1/201.abstract
The Evolving Preservative Landscape

• The definition of a safe food product has evolved to include more than just “free from harm”
• 45% of consumers actively avoid synthetic preservatives
• Consumers check labels for familiar sounding ingredients
The Evolving Preservative Landscape

• 1/3 of Americans say “food additives and ingredients are important food safety issues”
• Only 5% of that 1/3 have changed their eating behaviors because of their food safety risk

2017 FOOD & HEALTH SURVEY
Unintended Consequences

• Potential for increased food safety risks
  • Decreased effectiveness
  • Consumers may be unaware of the change in “use by” dates

• Shorter shelf-life
  • Increased food waste

• Unknown interactions of plant extracts
  • Contain many more concentrated chemicals than just those with antimicrobial aspects
Where to go from here?

Communicating effectively with consumers
Consumers just want to know!

- Information gives a sense of control
- More information increases confidence
Shared Values

• “Nobody cares how much you know, until they know how much you care.”

  • Theodore Roosevelt
Tell a Story

1. Setting Goals and Objectives
2. Figuring Out the “So What?”
3. The Message Box
4. Writing Clear Messages

Getting the attention of your audience

THE CONVERSATION

Academic rigor, journalistic flair

https://theconversation.com/us
IFIC Campaign – Process This

Process This:
Information about the food we eat surrounds us, yet much of it is low on evidence and high on hype. To help counter this misinformation, our team of self-proclaimed “food nerds” is focused on the facts. We cut through the clutter, sharing the science behind the food that lands in our carts, homes and bellies.

It’s no secret that some processed foods are calorie-dense and contain greater amounts of sugar, salt and fats than are recommended. Overconsumption of these foods in our diets can increase our risk of chronic disease including diabetes and obesity.

But science also shows us that modern food production and processing techniques contribute to the availability of safe, affordable, nutrient-dense and healthful foods. So the next time you encounter something about a food that makes you pause, process the science behind it!

Processing helps vegans be vegans.
Vegans may have a difficult time getting enough daily protein and other essential vitamins and minerals. Tofu is a plant-based, protein-rich food that is created by soaking, mashing and processing soybeans. It is a good option to help vegans meet their nutrient needs.

Process this: Gluten can’t free itself.
Individuals with celiac disease should not consume gluten, a protein found in wheat, rye and barley. Thanks to modern food production technology, nutritious and gluten-free options of many common foods are available for those who need to follow a gluten-free diet.

https://www.foodinsight.org/processthis/
New Initiative at Michigan State University

- Listen to public concerns
- Engage in meaningful dialogue
- Communicate science in understandable and impactful ways

food.msu.edu
References

- US FDA, Overview of Food Ingredients, Additives & Colors. [https://www.fda.gov/Food/IngredientsPackagingLabeling/FoodAdditivesIngredients/ucm094211.htm](https://www.fda.gov/Food/IngredientsPackagingLabeling/FoodAdditivesIngredients/ucm094211.htm)
- Fennema OR. Food additives—an unending controversy. American Journal of Clinical Nutrition, 1987, 46;1. [http://ajcn.nutrition.org/content/46/1/201.abstract](http://ajcn.nutrition.org/content/46/1/201.abstract)
- Advice shared from Science Communicators: Charlie Arnot, John Besley, Doug Dollemore, Skip Lupia, Andrew Maynard
Your future engagement is welcomed!

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