



INSTITUTE OF FOOD TECHNOLOGISTS

THE SOCIETY FOR FOOD SCIENCE AND TECHNOLOGY

CHARLES H. MANLEY, Ph.D. / *President, 1999-2000*

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August 22, 2000

Dockets Management Branch (HFA-305)
Food and Drug Administration
Room 1061
5630 Fishers Lane
Rockville, MD 20852

Re: Docket Number 00N-1351

The Institute of Food Technologists (IFT) appreciates the opportunity to offer comments to FDA as the agency considers use of the term "fresh" in labeling of foods processed with alternative nonthermal technologies. As the society for food science and technology with 29,000 members working in the food industry, academia, and government, IFT commends the agency for convening the July 3 public meeting to discuss this issue and solicit comment on several questions. Members of IFT's Nonthermal Food Processing Division, several of whom participated in the July meeting, are keenly interested in this issue. A small group of the Division's members drafted the comments below.

IFT believes that future implementation of new food processing technologies will be important to enhance food safety and consumer welfare. To assist commercialization and improve consumer awareness and understanding of these new technologies, IFT encourages FDA to clarify the important trade issues related to applying the term "fresh" to foods processed with new technologies (i.e., alternatives to thermal processing). Rapid and effective resolution of these issues will promote the availability of higher quality and more nutritious safe food products than thermally processed food products.

IFT believes that it would be appropriate to use the term "fresh" for products that are "not detectably different" (from their counterparts) as a result of the application of a specific alternative nonthermal technology to reduce spoilage or pathogenic microorganisms. With concern for the public welfare, it is the agency's responsibility to base the definition of "not detectably different" on reasonable interpretations that are consistent with both scientific state-of-knowledge and established regulations. Use of an alternative nonthermal technology that enhances food safety and enhances or extends product quality should not bar the products from being associated with the "fresh" identifier.

IFT suggests that application of new nonthermal processing technologies and the phrase "not detectably different" as a result of the specific process be evaluated using precedence already established by FDA. Fruit juice, for example, is extracted (with a number of nonthermal processing steps) from the natural fruit, yet chilled "fresh" juice is sold to consumers.

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Furthermore, FDA currently allows the use of the term "fresh" on fruits and vegetables treated by less than 1 kGy irradiation, a method of inactivating pathogenic and spoilage microorganisms with little to no impact on product taste and nutrient content. Pasteurized milk is also allowed to be labeled as "fresh." Some manufacturers currently add a microfiltration step to prolong the shelf life of "fresh" pasteurized milk. Consequently, IFT believes that other nonthermal technologies that also result in "not detectably different" products should likewise be allowed to use the "fresh" identifier.

IFT offers the following specific responses to selected questions raised by FDA:

Question #5: Do the new technologies preserve the foods?

As described in several peer-reviewed technical articles, the new alternative nonthermal technologies are food preservation methods. An intended result of the application of these alternative technologies to fresh foods is the reduction of both pathogenic and spoilage microorganisms, thus extending the time frame of acceptability for the fresh products. Substantial evidence exists for the extension of shelf life with many new processes applied to a wide variety of food products. The specific increase in shelf life, accompanied by enhanced product safety, is very product and process specific, however. The ultimate goal of any food preservation method is to extend product shelf life without quality deterioration and compromised food safety. Alternative nonthermal or minimal-thermal processing technologies address consumers' desire for high quality products that are safe to eat.

Question #6: Are the new technologies truly nonthermal?

Because some form of energy is applied in any intervention method, there is usually some measurable thermal component. The new alternative intervention methods, however, do not rely on the thermal component as a primary inactivation mechanism for controlling pathogenic or spoilage microorganisms. The primary advantage of the nonthermal technologies is that products processed with them may be pasteurized without reaching standard thermal pasteurization temperature and time conditions. Achieving a five-log cycle reduction in pathogens of concern in fruit juices using nonthermal technologies is an example.

IFT noted in a report to FDA (IFT, 2000) that much more research and data on new nonthermal processing technologies are needed. For example, more research is needed to determine if the thermal and nonthermal effects of high pressure and pulsed electric fields are simply additive or synergistic. Food processors must understand such interactions and be able to control and measure any temperature rise associated with the process. IFT clearly recognizes that shelf-stable foods produced by any process with a thermal component in a critical step will be regulated according to 21 CFR 113, 114 for low-acid foods and acidified foods, respectively.

Question #7: Are there quantifiable parameters, e.g., level of nutrients, vitamins, etc. that could be measured to determine if a food is "fresh?"

Yes, quantifiable parameters exist; this question, however, is of such scientific complexity that

any simple tests of "freshness," for regulatory purposes, may be precluded. There are many constituents that could be measured with very sophisticated quantitative instrumental or sensory tests to assess the technically defined "freshness" of a food product. The measurable level of any selected critical parameter, however, would vary with a number of factors including product, variety, location, season, and most importantly time and storage conditions after harvesting. "Fresh" would then be a relative descriptor that could be quantified by scientific measurements during the time between product manufacture and sale and consumption. The ultimate measurement of "fresh," however, is likely to be based on an individual consumer's own sensory perception. Consumers are likely to compare products that are labeled "fresh" to similar products that they have become accustomed to purchasing with that label. The consumer's ultimate satisfaction with the product involves a comparison of expected sensory quality (based on previous "fresh" label product experience) with the actual product characteristics.

In conclusion, the U.S. government has the responsibility to issue regulations that benefit and protect the U.S. public. Such regulations ultimately may also impact consumers worldwide. In addition to setting policies that ensure food safety and promote public welfare, regulators should also promote policies that clearly help consumers understand the characteristics of the food they purchase. IFT embraces the agency's partnering with academia and industry in the development of improved food processing technologies. Further, additional labeling information may either be required or found to be desirable by manufacturers for a specific new technology; such a question should be considered separately from "fresh" labeling.

In accordance with the above comments, IFT encourages FDA to make this issue—use of the term "fresh" for foods processed with alternative nonthermal technologies—a high priority during the next year, to help consumers understand the implications of the new high quality foods that are becoming available to them. IFT would be pleased to participate in further dialogue within the scientific community to help clarify this important issue.

Sincerely,



Charles H. Manley, Ph.D.
President

IFT. 2000. Kinetics of microbial inactivation for alternative food processing technologies. A report of the Institute of Food Technologists for the Food and Drug Administration of the U.S. Department of Health and Human Services. Mar. 29. pp. 283-286.

<http://vm.cfsan.fda.gov/~comm/ift-toc.html>.

cc: C. Patrick Dunne, Ph.D., Chair, IFT Nonthermal Food Processing Division

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