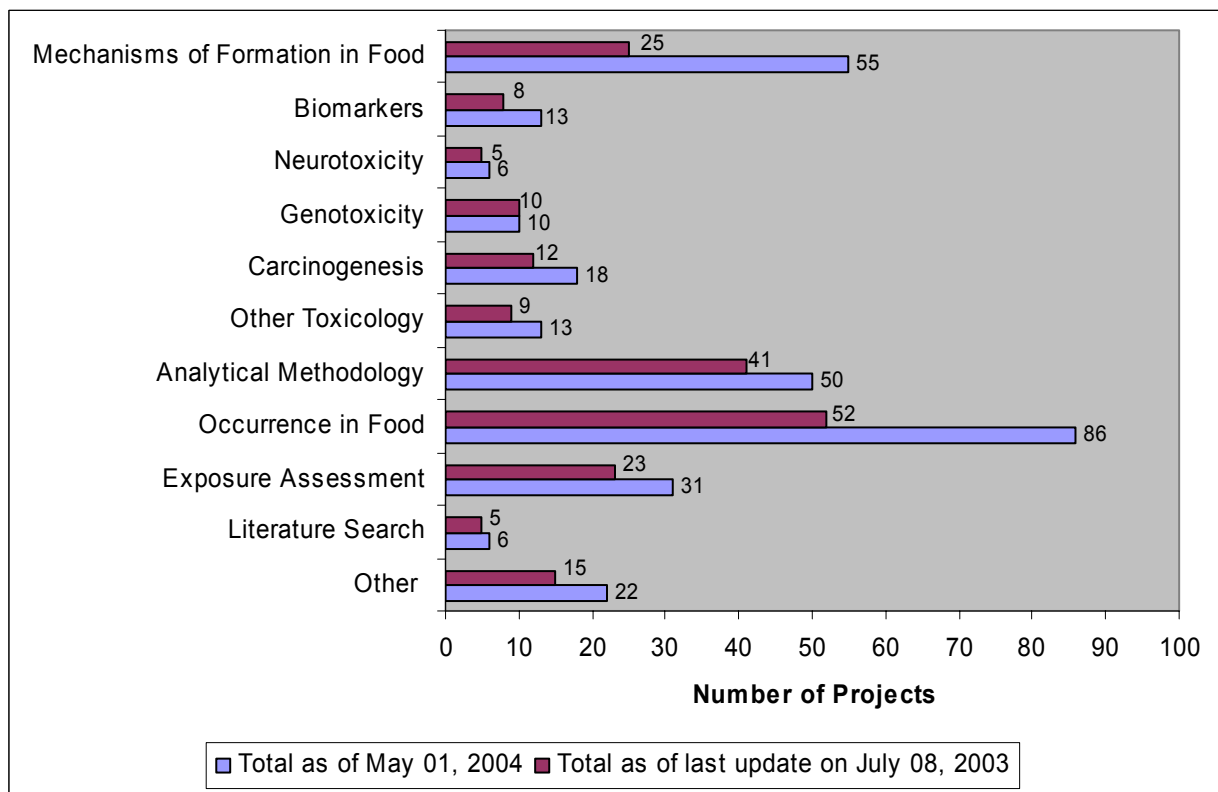


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Research Database

The following chart represents the distribution of 189 research projects listed in the research database in addition to ten listed in the Studies in Development database as of May 01, 2004. JIFSAN has been working with the European Food Standards Agency (EFSA) to have projects listed in their acrylamide information database also listed in the Acrylamide Infonet. This has recently been accomplished and the cooperation between the two groups will continue.

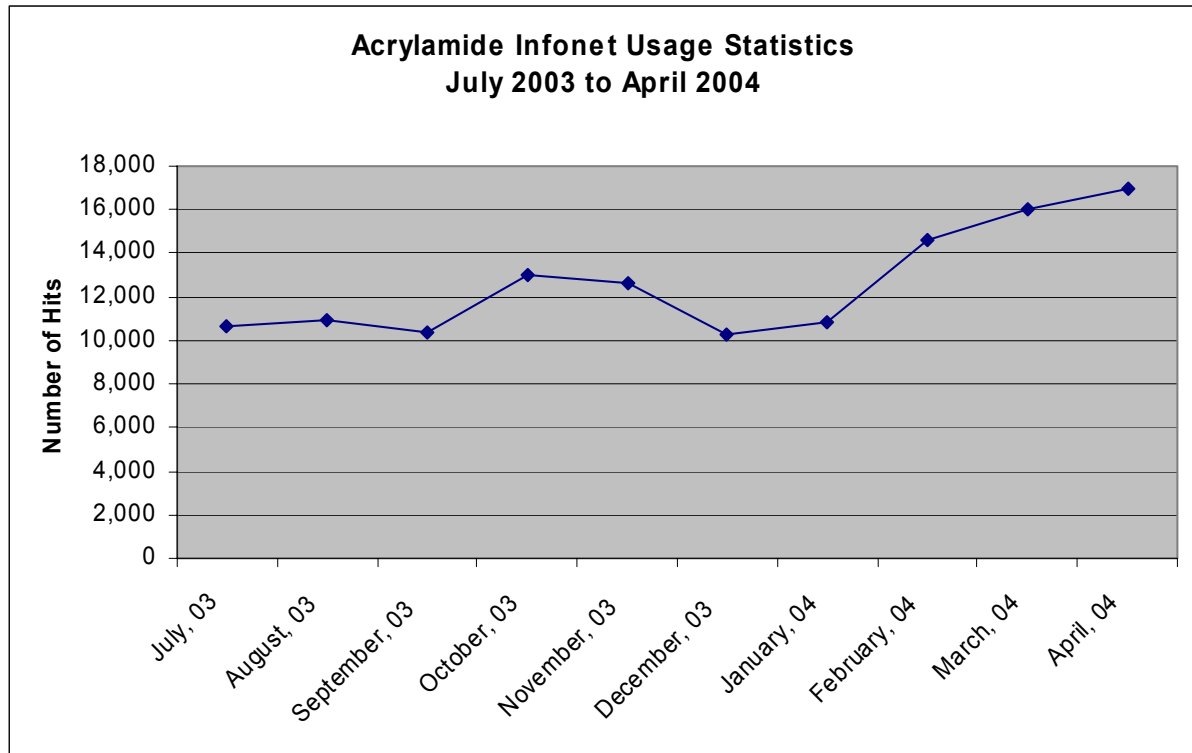


Study status breakdown for research projects listed in the Research Database:

- Ongoing = 134
- Presented = 30
- Published = 25

Acrylamide Infonet Website Usage Statistics

The Infonet website has received close to 125,000 hits between July 2003 and April 2004. Again, the majority of hits were received from North America, Europe, and Asia. The graph below shows the monthly traffic from July 2003 to April 2004.



Publications

The publications section of the website has been recently revamped to better organize the increasing number of publications related to acrylamide in food. It is now divided into five subsections: 1) General Information/Reviews, 2) Formation and Reduction of Acrylamide, 3) Occurrence of Acrylamide and Analytical Techniques, 4) Toxicology, and 5) Polyacrylamide.

The publications section contained 22 records in July 2003 (as of last update). It now has total of 147 records distributed as follows:

- General Information/Reviews = 24
- Formation and Reduction of Acrylamide = 35
- Occurrence of Acrylamide and Analytical Techniques = 36
- Toxicology = 44
- Polyacrylamide = 8

Current Research Status

Since the last Acrylamide Infonet Update, research on the issues raised by the occurrence of acrylamide in food has continued and increased in all areas including acrylamide contents in different foods, mechanism(s) of formation of acrylamide in foods, exposure from diets in different countries, toxicology and metabolic consequences, reduction/mitigation of acrylamide formation in foods, and risk communication. Results have been shared at several international meetings with more scheduled for the near future.

Considerable progress has been made on potential means of reducing the formation of acrylamide in certain potato products, such as French fries, particularly in the EU. Investigations have revealed that reduction in some products, such as baked goods and coffee, is much more complex and difficult to accomplish realistically. Mechanistic studies have indicated that the reaction of asparagine and glucose/fructose through the Maillard reaction is probably the most common and important mechanism. However, the occurrence of other mechanisms of formation has not been ruled out.

It has been shown that the occurrence of acrylamide in food is a general food problem, not just a problem in potato products. There is still a great need for research and information concerning the acrylamide contents in foods in many parts of the world; acrylamide formation during home foods preparation; exposure of individuals to acrylamide from diets consumed in most countries, particularly non-Western countries; and the toxicology and metabolic consequences of consumption of acrylamide from foods. Considerable work is in progress in the latter area and results are anticipated in the near future. This information is vitally needed to determine potential health consequences of acrylamide consumption.

A JECFA meeting on acrylamide is planned for February 2005.

Critical Need for Sharing of Analytical Data

As indicated in the last Update, FAO/WHO has issued a call for representative data on amounts of acrylamide in food and the total diet that are both reliable and comparable at the international level. It would be most helpful if the data are representative of an entire country. Data from developing countries are particularly encouraged. All data will be provided to the FAO/WHO Expert Committee on Food Additives (JECFA) for its safety evaluation. Instructions for submitting data through the Acrylamide Infonet and information on the “confidentiality” of data, when needed, are included at www.acrylamide-food.org.

It has been very difficult, if not impossible, to obtain such data thus far. JRC IRMM in the EU has also established a database for such data and has received some data from member countries of the EU. The JRC IRMM and the Acrylamide Infonet are establishing a cooperative effort to obtain and share as much data as can be obtained. This is critically needed by JECFA and should be submitted as soon as possible.

Future Meetings:

Joint FAO/WHO Expert Committee on Food Additives, February 9 – 17, 2005, Rome, Italy. Acrylamide is one of the contaminants to be considered. Information on this meeting can be obtained at: ftp://ftp.fao.org/es/esn/jecfa/jecfa64_call.pdf

Past Events:

American Chemical Society (ACS) Symposium “Chemistry and Safety of Acrylamide in Food,” was held March 28 – April 1, 2004, Anaheim, California, USA. Organized by Agricultural and Food Chemistry Division, ACS. Topics included Mechanisms of Formation in Food, Effect of Processing, Analysis, Distribution in the Food Chain, Preventing Formation in Food, Sources of Human Exposure to Acrylamide, Risk Assessment, Biomarkers of Exposure, Safety and Toxicology. Abstracts of papers from this meeting are available at:

<http://oasys2.confex.com/acs/227nm/techprogram/S12987.HTM>

JIFSAN Workshop “Update: Scientific Issues, Uncertainties, and Research Strategies on Acrylamide in Food” was held April 13-15, 2004, Chicago, Illinois, USA. The goal of this workshop was to provide a venue for sharing the status and results of research conducted globally on acrylamide in food since 2002. The workshop focused on science and sought to identify critical data gaps that still remain for evaluating the impact of acrylamide in food. Information from this meeting can be located at:

<http://www.jifsan.umd.edu/acrylamide2004.htm>.

EFSA Workshop on Acrylamide Formation in Food, November 17, 2003, Brussels, Belgium. Organized on behalf of EFSA by the FSA and VWA, with assistance from CIAA and the EC. Information from this meeting is available at:

http://www.efsa.eu.int/science/ahawdocuments/catindex_en.html

Experts on Contaminants in Food Workshop – Ways to Reduce Levels of Acrylamide in Food, EU Stakeholders Workshop, October 20 – 21, 2003, Brussels, Belgium. Health and Consumer Protection Directorate-General, European Commission. Information on this meeting can be obtained at:

http://europa.eu.int/comm/food/food/chemicalsafety/contaminants/acryl_guidance.pdf

Symposium: Acrylamide in Food(s): Chemistry, toxicology, and regulations. Institute of Food Technologists (IFT) Annual Meeting, July 12-16, 2003, Chicago, Illinois, U.S.A. Topics included exposure assessment, risk assessment, U.S. food laws, toxicology, and levels and formation of acrylamide. Abstracts of papers from this meeting can be found at:

http://ift.confex.com/ift/2003/techprogram/session_2072.htm

http://ift.confex.com/ift/2003/techprogram/session_2488.htm