Risk Analysis Program and Exclusive Tools on Foodrisk.org

Clare Narrod and Kyle McKillop,
Joint Institute for Food Safety & Applied Nutrition

**When?**
- Established in 1996.

**What?**
- A multidisciplinary research, education and outreach program – domestic and international in scope

**How?**
- A collaborative effort between the University of Maryland, the U.S. Food and Drug Administration (CFSAN and CVM), and the private sector
- Collaborations have extended to include other federal and international government agencies, industry, other academic institutions and consumer groups

**Concepts of Operation**
- Build programs through partnerships to promote food safety at home and abroad
- Leverage and share resources
- Create a neutral environment conducive to exchange of ideas and research
- Develop domestic and international collaborations
JIFSAN Strategic Thrusts

- Support research that contributes to the development of science-based public health policies
- Foster the establishment of sustainable partnerships for research, training and outreach globally
- Expand global capacity in food safety & risk analysis through train-the-trainer initiatives
- Develop and sustain educational resources to train a skilled workforce in food safety and applied nutrition
Food Safety Training Portfolio

• International Training Program
  • Good Agricultural Practices (GAP)
  • Good Aquacultural Practice (GAqPs)
  • Commercially Sterile Packaged Food (CSPF)
  • Food Inspector Training (FIT)

• Global Food Safety Collaborating Training Initiatives

• International Food Safety Training Laboratory (IFSTL)
  • Courses in microbiology and chemistry lab methods

• Food safety risk analysis courses
  • Risk Assessment
  • Risk Management
  • Risk Communication
### Core Courses (online & classroom)
- Overview of risk analysis
- Risk management
- Risk communication
- Risk assessment
- 1 day Risk communication

### Intermediate & Advanced Courses
- Quantitative risk assessment methods: probabilistic methods and model building

### Customized courses
- Risk Communication
- Risk Management
- Quantitative Risk Assessment
- Overview
New Courses

**Added**
- Quantitative Risk Assessment Refresher with Epix Analytics Fall 2013
- Advanced Quantitative Risk Assessment with Epix Analytics, Fall 2013
- International Food Law (Spring 2014-Malaysia; Fall, 2014)

**Planned 2015**
- Chemical Risk Assessment
- Epidemiology for Food Safety Risk Analysis
- Risk Analysis for Regulatory Officials
- Introduction to Probability Theory
Participation in JIFSAN Risk Analysis Courses, 2009-2013

- **Online**
- **In-Person**
Food Safety Risk Analysis Courses

1400 Individuals from 47 Countries
Extended Internship

- International Life Science Institute (ILSI) /Coca Cola 3 month fellowship, Travel and tuition, mentoring costs
- 2013 opened up fellowship to 4 participants (2 Malaysia sponsored by their government)
- 2013 Research projects
  - Sulfonamide in chicken meat
  - Acrylamide in potatoes
  - Campylobacter in broiler chicken
  - Carmel colorant in beverages
- 2014 2 China
FoodRisk.org database

- Only comprehensive online resource for food safety risk analysis;
- Includes unique datasets, tools, and links to numerous sources of information.
- New Web based tools
- Host to the US Interagency Risk Assessment Consortium
Foodrisk.org Exclusive Tools
Now and Future

• **ICRA**: Interactive online Catalogue on Risk Assessment
• **FCID**: Food Commodity Intake Database
• **FDA-iRISK®**: Web-based, comparative risk assessment
• **PPOD**: Produce Point of Origin Database
• *Future*: **NoroDB**: Norovirus Literature Database
• *Future*: **Violations Database**: National Standardized Database of Food Safety Inspections for Retail Establishments
• *Future*: **Rule making database**
Interactive online Catalogue on Risk Assessment - ICRA

• Web tool offering a dynamic model catalogue for existing microbial risk assessments for risk assessors aiming to develop their own models.

• Allows users to compare and contrast models from the same pathogen and/or commodity
ICRA

• Funded by the National Institute for Food and Agriculture (NIFA) of the United States Department of Agriculture.

• Partnership between:
  – The National Institute for Public Health and Environment (RIVM) in the Netherlands
  – The National Food Institute (DTU Food) at the Technical University of Denmark
  – The Joint Institute for Food Safety and Applied Nutrition (JIFSAN) at the University of Maryland.
Welcome to The Interactive online Catalogue on Risk Assessment (ICRA)! ICRA was funded by the National Institute for Food and Agriculture (NIFA) of the United States Department of Agriculture. It is a partnership between the National Institute for Public Health and Environment (RIVM) in the Netherlands, the National Food Institute (DTU Food) at the Technical University of Denmark, and the Joint Institute for Food Safety and Applied Nutrition (JIFSAN) at the University of Maryland. ICRA serves as a web tool offering a dynamic model catalogue for existing microbial risk assessments for risk assessors aiming to develop their own models. ICRA allows users to compare and contrast models from the same pathogen and/or commodity.

ICRA relies on contributions from risk assessors and modelers around the world to submit their models, populating the online catalogue. Therefore, we would like to invite you to upload your model! Don’t worry: once your model is “live” on ICRA, you can always come back to revise or even remove it if you would like.

We have developed online tutorials to take you through the basic steps needed to enter your models. There is also a user guide that we recommend you peruse in case you have questions about the ICRA terms and hierarchy. We hope you find it straightforward and easy to understand. Please do not hesitate to contact us if you have any questions or comments.

We hope you find ICRA to be a valuable tool to which you are willing to contribute. On behalf of RIVM, DTU Food, and JIFSAN, I would like to thank you for your time and valuable collaboration. We invite you to explore the models currently in ICRA, as well as to sign up to enter your own models!
Processing

**METADATA**
Type: Slaughter
Description: Processing includes primary processing from entry to the slaughter house to after the immersion chiller. The model examines the effect on the prevalence and numbers of bacteria throughout, including cross contamination at the defeathering stage.

**PHASES**
- Scalding
- Defeathering
- Evisceration
- Washing
- Chilling

Scalding

**METADATA**
Description: Predicts the number of Campylobacter on a carcass after scalding.
- contamination_addition
- growth
- inactivation_reduction
- prevalence_change

**QUANTITY LEVEL ONES**
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Unit</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>N_{after scald}</td>
<td>log cfu/carcass</td>
<td>Carcass</td>
</tr>
</tbody>
</table>

CARMA / processing

**METADATA**
Type: Slaughter
Description: Industrial processing in a typical large Dutch processing plant

**PHASES**
- entrance
- scalding
- defeathering
- evisceration
- washing
- chilling

CARMA / processing / scalding

**METADATA**
Description: low scalding process
- inactivation_reduction

**QUANTITY LEVEL ONES**
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Unit</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>N_{eas_c}</td>
<td>cfu/carcass</td>
<td>Carcass</td>
</tr>
</tbody>
</table>
ICRA

- [http://icra.foodrisk.org](http://icra.foodrisk.org)
- Sign up to enter a model at
  - [http://icra.foodrisk.org/signup](http://icra.foodrisk.org/signup)
  - Models must be approved by one of ICRA’s moderators before being published live in ICRA’s available list of risk assessment models
FCID

- **What We Eat in America – Food Commodity Intake Database (Currently 2003-2008)**
- Developed by U.S. EPA's Office of Pesticide Programs (OPP) to improve the utility of the WWEIA food consumption survey for dietary exposure assessment.
- Translates food consumption as reported eaten in WWEIA (1999-08 survey cycles) and CSFII (1994-96/1998) surveys into consumption of U.S. EPA-defined food commodities.
- Online version developed by JIFSAN in collaboration with EPA.
Dietary Risk Assessment Models

Food Consumption
NHANES/WWEIA

Food Recipe Database
http://fcid.foodrisk.org/recipes/

Raw Ingredient Consumption (FCID)
http://fcid.foodrisk.org/dbc/

Ingredient Pesticide Residue (PDP or FT)
http://www.ams.usda.gov/pdp

Dietary Exposure

Acceptable Level
aPAD, cPAD, etc.

Health Effects Division
Office of Pesticide Programs
August 20, 2012
Welcome to the U.S. EPA’s What We Eat in America - Food Commodity Intake Database, 2003-2008 (WWEIA-FCID 2003-08)!

WWEIA-FCID 2003-08 was developed by U.S. EPA’s Office of Pesticide Programs (OPP) to improve the utility of the WWEIA food consumption survey for dietary exposure assessment. WWEIA-FCID 2003-08 translates food consumption as reported eaten in WWEIA (1999-08 survey cycles) and CSFII (1994-96/1998) surveys into consumption of U.S. EPA-defined food commodities. Such food commodity intakes are expressed as grams of food commodity consumed per kg body weight per day for over 500 commodities derived from more than 6000 different foods and beverages reported in the two surveys. WWEIA-FCID 2003-08 is intended to complement the CSFII and NHANES/WWEIA databases in that it provides estimates of food consumption expressed as food commodities as opposed to foods per se (i.e., "as eaten") which can in some exposure and other situations be of more utility. The database also includes WWEIA 2003-08 food consumption and demographic data that is available through CDC’s National Center for Health Statistics at this page.

Getting Started

Click the buttons below to get started.

- The FCID Recipes button provides a form that can be used to search FCID recipes and generate a printer-friendly report.
- The FCID Commodity Consumption Calculator button is an application that uses NHANES/WWEIA food intake and FCID recipes to estimate food commodity consumption.
- The Database Contents button provides a navigable list of tables and forms in the database.

FCID Recipes

FCID Commodity Consumption Calculator

Database Contents and More Information
### Your Search

**Commodities:**
- Milk, fat

### Percentage Eaters

98% of total US population eat searched commodities

#### Percentiles - commodity mass (g)

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>5%</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
<th>40%</th>
<th>45%</th>
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<th>75%</th>
<th>80%</th>
<th>85%</th>
<th>90%</th>
<th>95%</th>
<th>100%</th>
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<tbody>
<tr>
<td>Commodity Eaters Only</td>
<td>46,943</td>
<td>18.2</td>
<td>0.0</td>
<td>2.0</td>
<td>3.5</td>
<td>5.1</td>
<td>6.5</td>
<td>7.9</td>
<td>9.4</td>
<td>11.0</td>
<td>12.6</td>
<td>14.3</td>
<td>15.9</td>
<td>17.8</td>
<td>19.8</td>
<td>22.3</td>
<td>25.0</td>
<td>28.2</td>
<td>32.2</td>
<td>38.4</td>
<td>49.1</td>
</tr>
<tr>
<td>Total Population</td>
<td>49,237</td>
<td>17.8</td>
<td>0.1</td>
<td>1.4</td>
<td>2.8</td>
<td>4.6</td>
<td>6.0</td>
<td>7.5</td>
<td>8.9</td>
<td>10.5</td>
<td>12.2</td>
<td>13.9</td>
<td>15.6</td>
<td>17.4</td>
<td>19.5</td>
<td>21.9</td>
<td>24.7</td>
<td>27.9</td>
<td>31.9</td>
<td>38.0</td>
<td>48.7</td>
</tr>
</tbody>
</table>

#### Percentiles - commodity mass (g) per body mass (kg)

| N          | Mean | 5% | 10% | 15% | 20% | 25% | 30% | 35% | 40% | 45% | 50% | 55% | 60% | 65% | 70% | 75% | 80% | 85% | 90% | 95% | 100% |
|------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Commodity Eaters Only | 46,943 | 0.3 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.8 | 1.2 | 1.2 | 8.7 |
| Total Population | 49,237 | 0.3 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | 0.5 | 0.6 | 0.8 | 1.2 | 8.7 |
FCID

- [http://fcid.foodrisk.org](http://fcid.foodrisk.org)
- Coming Soon
  - Update to FCID 2005 – 2010
  - More significant digits
  - Notation for real zero vs rounded zero results
  - Updated interface for mobile device use
  - Ability to switch between new and old datasets
FDA-iRISK®

• Web-based, risk ranking tool that enables one to compare public-health impact of microbial and chemical hazards
  – One hazard in different foods (Ecoli in ground beef, leafy greens)
  – Multiple hazards in a single food (Ecoli, salmonella, in leafy greens)
  – Multiple hazards in multiple foods
FDA-iRISK®

- Food and Drug Administration Center for Food Safety and Applied Nutrition (FDA/CFSAN)
- Joint Institute for Food Safety and Applied Nutrition (JIFSAN)
- Risk Sciences International (RSI)
FDA-iRISK® (cont.)

• Conduct fully quantitative, fully probabilistic risk assessments relatively rapidly and efficiently
• Compare and rank risks from multiple foodborne microbial and chemical hazards
• Predict effectiveness of prevention and control measures.
• Use FDA-iRISK®'s estimates of public-health impact to inform food-safety policy and management decisions. Source: FDA iRisk webinar

Source: FDA iRisk webinar
iRISK Model Uses Established Components of Risk Assessment

**Hazard Identification**
Describes hazard / host / food characteristics that impact the risk

**Exposure Assessment**
How often is the hazard ingested?
How many are ingested?

**Hazard Characterization**
For a given ingested dose, how likely is the adverse effect?

**Risk Characterization**
What is the probability of occurrence of the adverse effect?
What is the impact of *interventions* to change the risk?

(Codex Working Principles)

Source: FDA iRisk webinar
What iRISK can do – a snapshot

- Enables users to construct risk scenarios more easily (user inputs data via online interface)

- Carries out calculations via Monte Carlo simulation

- Saves data and presents results in two forms:
  - brief, convenient table
  - accompanying full-documentation report, for reference

Source: FDA iRisk webinar
iRISK: Some Features

- Built-in math / probabilistic calculation functions
- Built-in standard data entry templates
  - Users input data reflecting their real-world situations
- Built-in quick tutorial with examples
- Enables assessment/comparison of risks at all stages in food supply system
- Enables intervention comparisons
- Results presented as public-health metrics

Source: FDA iRisk webinar
Examples of User Input (Data)

- Process model
  - Initial prevalence and levels
  - Production/processing/handling steps
- Consumption patterns
- Dose-response relationship
- Health outcomes

...all represented by quantitative data

Source: FDA iRisk webinar
Health Impact Metrics

- Disability Adjusted Life Years (DALY), a commonly used metric
  - Integrates info on severity, duration of illness (burden of disease)
  - Translates # of illness cases & deaths into common metric (years of healthy life lost)
  - Allows comparison of burden of disease from microbial pathogens and chemical hazards (may have different illness severity and duration)

Source: FDA iRisk webinar
Home

FDA-iRISK is a web-based system designed to analyze data concerning microbial and chemical hazards in food and return an estimate of the resulting health burden on a population level.

The data required to execute this analysis include the food and its associated consumption data and processing/preparation methods, the hazard and its dose-response curve, and the anticipated health effects of the hazard when ingested by humans. Each of these elements contributes an essential piece of information to the model on which the final estimate of risk is based.

When you register, you will be assigned your own personal workspace in which to model food/hazard risk scenarios. You may also share this workspace with others to view.

For a complete description, review the Quick Start Tutorial and User Guide on the Help page before beginning.

Please Login or Register.

Suggested Citation

Where the FDA iRISK system is used in risk assessment research and other food safety activities, reference to the system should be made as follows:

Risk Models

Select a hazard, food, process model or risk scenario to work with on the tabs below, or add a new one.

Dose response models and hazard metrics are defined as part of hazards. Consumption models are included as part of foods. Process models modify hazard concentration in the food as the food is processed.

Computed risk scenarios combine information from previously-defined food, hazard, dose response, hazard metric, consumption and process model entries to compute a risk measure. Specified risk scenarios use provided data to compute the risk measure for a previously-defined food and hazard.

For a complete description, review the Quick Start Tutorial and User Guide on the Help page before beginning.

Show models for: My Account

Hazard List:

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Type</th>
<th>Add Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aflatoxin B1</td>
<td>Chemical</td>
<td>Edit, Delete</td>
</tr>
<tr>
<td>Ammonia</td>
<td>Chemical</td>
<td>Edit, Delete</td>
</tr>
<tr>
<td>L. monocytogenes</td>
<td>Microbial Pathogen</td>
<td>Edit, Delete</td>
</tr>
<tr>
<td>Salmonella</td>
<td>Microbial Pathogen</td>
<td>Edit, Delete</td>
</tr>
</tbody>
</table>
Rank Scenarios Report

The report title and abstract provided will be included in the report. Use the checkboxes to select which scenarios to include in the report and click "Generate Report For Checked". Or, click "Generate Report For All Listed" to select all.

If the list of scenarios is very long, use the filters to refine the list.

Any scenarios with the same Group text will be treated as a group during ranking (their individual results will be summed).

Clicking on the "Generate" buttons will submit the request to a queue. Use the Report History tab on the Reports page to view its status.

List scenarios for: My Account

Report Title: IRISK Scenario Ranking Summary Report

Report Abstract:

Filters:
- Food: All
- Hazard: All
- Metric: All
- Exposure: All
- Type: All

Group Run Scenario
- Aflatoxin B1 in Tortilla Chips (Tortilla Chips, Aflatoxin B1, DALY, Chronic, Computed)
FDA-iRISK®

- [http://irisk.foodrisk.org](http://irisk.foodrisk.org)
PPOD

• *Produce Point of Origin Database*

• Selected commodity-specific information on the movement of produce in the United States, either domestic or international, based on seasonality data.

• Data are compiled from the United States Department of Agriculture (USDA) Agricultural Marketing Service (AMS) Market Reports.
PPOD

• Commodities are supplemented with commodity-specific facts such as shelf life and links to information on the Centers for Disease Control and Prevention (CDC) Outbreak Response Team (ORT) and Food and Drug Administration (FDA) Outbreak Investigations websites

• Funded through FDA’s Cooperative Agreement with JIFSAN
Welcome to the Produce Point of Origin Database (PPOD). PPOD is a searchable database that provides selected commodity-specific information on the movement of produce in the United States, either domestic or international, based on seasonality data. The information is compiled from the United States Department of Agriculture (USDA) Agricultural Marketing Service (AMS) Market Reports.

The movement data is categorized for each commodity by year and month, and includes only shipments exceeding 100,000 lbs. (with the exception of herbs). Commodity-specific facts on the shelf life and examples of related outbreaks, if applicable, are also provided for each type of produce. Links to information on the Centers for Disease Control and Prevention (CDC) Outbreak Response Team (ORT) and Food and Drug Administration (FDA) Outbreak Investigations are also available on the page of each produce commodity.

We hope that you find this searchable database useful in researching the movement of produce commodities in the United States.

Data is based on a custom movement report from the United States Department of Agriculture/Agriculture Marketing Service’s Fruits and Vegetable Portal. More about the data can be found on our Methods Page.

Commodities

Please select one of the following commodities to receive more data:

- Arugula
- Avocado
- Basil
- Blackberry
- Blueberry
- Cabbage
- Cantaloupe
- Cilantro
- Cucumber
- Green Grapes
- Green Onion
- Honeydew Melon
- Jalapeno Pepper
- Kale
- Lettuce (Iceberg)
- Lettuce (Romaine)

Location

ARGENTINA

Location Results
Honeydew Melon

Shelf Life:
Storage of honeydew melon is 12-15 days at 45°F and 85% - 90% humidity.

For more information:
- [www.fda.gov/Food/RecallsOutbreaksEmergencies/Outbreaks/ucm272351.htm](http://www.fda.gov/Food/RecallsOutbreaksEmergencies/Outbreaks/ucm272351.htm)
### About the data:

- **<1** – Data exists for this data point but is less than 100,000LBS
- If data point does not exist for a queried month it is 0

Data was gathered from a custom movement report generated by the USDA Agricultural Marketing Service's "Fruit & Vegetable" Portal. For more information about our data see our methods page.
PPOD

- http://ppod.foodrisk.org
- Launching Soon
- Future Applications of PPOD
Future - NoroDB

- **Norovirus Literature Database**
- FDA Center for Food Safety and Applied Nutrition (CFSAN) compiled
- Searchable
- Coded with keywords for:
  - Research Keywords
  - Detection Methods
  - Viruses
- Funded through FDA’s Cooperative Agreement with JIFSAN
<table>
<thead>
<tr>
<th>Leading Authors</th>
<th>Title</th>
<th>Year</th>
<th>Journal</th>
<th>Volume</th>
<th>Pages</th>
<th>View</th>
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<tr>
<td>Hoffmann, S., Batz, M.B., Morris, J.G.</td>
<td>Annual Cost of Illness and Quality-Adjusted Life Year Losses in the United States Due to 14 Foodborne Pathogens</td>
<td>2012</td>
<td>Journal of Food Protection</td>
<td>75</td>
<td>1292-1302</td>
<td>View</td>
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<td>Shen, Q., Zhang, W., Yang, S., Cui, L., Hua, X.</td>
<td>Complete Genome Sequence of a New-Genotype Porcine Norovirus Isolated from Piglets with Diarrhea</td>
<td>2012</td>
<td>Journal of Virology</td>
<td>86</td>
<td>7015-7016</td>
<td>View</td>
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<td>Horm, K.M, Davidson, P.M., Harte, F.M., D’Souza, D.H.</td>
<td>Survival and Inactivation of Human Norovirus Surrogates in Blueberry Juice by High-Pressure Homogenization</td>
<td>2012</td>
<td>Foodborne Pathogens and Disease</td>
<td>9</td>
<td>974-980</td>
<td>View</td>
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<td>Menon, V.K., George, S., Aladin, F., Nawaz, S., Sarkar, R., Lopman, B., Gray, J.J., Iturriza-Gomara, M., Kang, G.</td>
<td>Comparison of Age-Stratified of Antibodies against Norovirus GII in India and the United Kingdom</td>
<td>2013</td>
<td>PLOS One</td>
<td>8</td>
<td>e56239</td>
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<td>Dai, Y.C., Zhang, X., Tan, M., Huang, P., Lei, W., Fang, H., Zhong, W., Jiang, X.</td>
<td>A Dual Chicken IgY against rotavirus and norovirus</td>
<td>2013</td>
<td>Antiviral Research</td>
<td>97</td>
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<td>David, R.</td>
<td>Norovirus strikes back</td>
<td>2013</td>
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</table>
Future – Violations Database

• A National Standardized Database of Food Safety Inspections for Retail Establishments
  • Integrate open government data of food safety inspections for retail establishments
  • Build, maintain, study and distribute a national standardized database
  • Develop and provide data analysis tools
  • Offer a platform for local governments to contribute, share and utilize food safety data

• An academic team led by Professors Bederson, Jin and Leslie at University of Maryland and UCLA

• Funded by Sloan Foundation 2011-13
• To be joint with JIFSAN for future growth
PROJECT DESCRIPTION

The goal of this project is to compile, study, and openly distribute a nationally standardized database of government health inspectors' restaurant ratings.

Information disclosure is an important policy tool in many contexts. By empowering consumers to make more informed choices, firms face enhanced incentives for delivering high quality services. If the disclosed information reflects regulatory activities, disclosure also allows the public to better monitor the government and improve the efficacy of regulation. Several studies verify this intuition, including our own research showing that the posting of restaurant hygiene grade cards in restaurant windows in Los Angeles in 1998 caused a 20% reduction in the number of people admitted to hospital with food-related illnesses (Jin and Leslie, 2003).
Showing results 1-100 of 1208 | Next

1. Jack in the Box
   5920 Cutting Blvd, El Cerrito, CA 94530
2. Jack in the Box
   4740 Clayton Rd, Concord, CA 94530
3. Jack in the Box
   1051 Willow Pass CT, Concord, CA 94530
4. Jack in the Box
   3400 N Macarthur Dr, Tracy, CA 95376
5. Jack in the Box
   733 W Charter Way, Stockton, CA 95206
6. Jack in the Box
   1695 El Camino Real, S San Francisco, CA 94080
7. Jack in the Box
   22861 Lake Forest Dr, Lake Forest, CA 92630
8. Jack in the Box
   720 E Dyer Rd, Santa Ana, CA 92705

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<td>Los Angeles County, CA</td>
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<td>Maricopa County, AZ</td>
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Analyses supporting rulemaking
The University of Maryland’s College of Agriculture and Natural Resources’ Center for Food Safety and Security Systems (CFS3) entered into a 5-year agreement with USDA’s Agricultural Research Service’s Beltsville Human Nutrition Research Center (BNHRC) to help evaluate and upgrade their computer systems and information databases.
• Improving the use of nutrient data collected at USDA and the private sector  
  – Looking at ways to augment the USDA National Nutrient Database with “nutrient composition of branded foods and private label” data provided by the food industry.
ATIP - Branded Food Products Database for Public Health

• USDA maintains a National Nutrient Database
• Food industry has compositional data for their own products, very little of that data is publicly available through the database.
• Public-Private Partnership:
  – USDA/ARS
  – International Life Sciences Institute (ILSI) North America
  – ATIP (Agricultural Technology Innovation Partnership) Foundation
• Ensure this information will be made available to those who utilize such data including the government, the scientific community, proprietary end users, and the food industry.
Other Training Programs AT JIFSAN
GAPs WORLDWIDE

Mexico

Guatemala

Honduras

El Salvador
(2006, 2009)

Nicaragua
(2007, 2008)

Costa Rica
(2008, 2019*)

Dominican Republic
(2002, 2009)

Jamaica
(2013)

Puerto Rico
(2002)

Ecuador
(2012)

Peru

Trinidad
(2000*)

Brazil

China (2006)

Korea (2004)

India (2012, spice)

Thailand (2005)

Not included in the map: 10 day internship in the US for India spice (2013)

*: The following GAP trainings were regional trainings:

Trinidad 2000: West Indies.
Peru 2003: Andean Region (Bolivia, Colombia, Ecuador, Peru, and Venezuela).
Costa Rica 2010: Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panamá), Dominican Republic, and Mexico.
Honduras 2012: Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panamá), Dominican Republic, Mexico, and the OIRSA office.
Not included in the map: 10-day internship in the US for 9 Bangladeshi trainers (2010)

One training session: China (2011), Indonesia (2007), Malaysia (2010), Thailand (2007);
Two training sessions: Vietnam (2006, 2012);
Four training sessions: Bangladesh (2008, 2009, 2010, 2011);
Five training sessions: India (2012, 2013 (four sessions in the same year in different cities)).
CSPF & FIT WORLDWIDE

Morocco (1)
CSPF (2009)

China (4):
CSPF (2): 2010 & 2011
FIT (2): 2012 & 2013

Malaysia (1)
FIT (2013)
IFSTL Participants WORLDWIDE
(up to Dec 2013)

15 or more participants: Malaysia (18), USA (38)
10 to 14 participants: Guatemala (10), Chile (11), China (11), Korea (14)
6 to 9 participants: Dominican Republic (7), Egypt (6), Indonesia (9)
2 to 5 participants: Canada (2), Costa Rica (2), Honduras (2), Philippines (2), Saudi Arabia (2), Thailand (2), Mexico (3), Russia (3), Vietnam (3)
Only one participant: Australia, Barbados, El Salvador, France, India, Iraq, Kenya, Netherlands, Pakistan, Peru, Puerto Rico, Saint Lucia, Sudan
Global Collaborating Training Initiative

- Obtain support through partnerships with host country, industry and local institutions
- Utilize existing resources within host country
- Develop a cadre of in-country trainers to conduct on-going extension-like training
• Bangladesh (GAqP)
  – Bangladesh Shrimp and Fish Foundation

• India (Supply Chain Management for Spices and Botanical Ingredients)
  – CII Jubilant Bhartia Food and Agriculture Centre of Excellence
  – Spice Board

• Mexico (GAP)
  – SENASICA who is reaching out to universities in MX
  – National Autonomous University of Mexico (initial partner)

• Thailand (CSPF)
  – King Mongkut’s University of Technology Thonburi (KMUTT)
  – Chulalongkom University

❖ To provide a vehicle and framework to sustain in-country regional training and capacity building thereby leveraging JIFSAN and FDA training resources.
International Food Training Center in Malaysia

In February 2013, JIFSAN, Delta Professional Consultancy and the Malaysia Ministry of Health initiated a 3 year project that focuses on building: laboratory testing capacity; risk analysis capabilities; increasing the skills of the Ministry’s food inspection staff; and increasing their understanding of global food laws and regulations.

Courses taught so far:

At JIFSAN
Methods for Development of Pesticides Residue Analysis and Use of Data in Risk Analysis
Risk Analysis
Methods of Identification of Salmonella and Campylobacter in Food
Methods for Identification of Shiga toxin Producing E. coli Lab

In Malaysia
Food Inspection Training Microbiological Food Safety Lab
Food Safety and Food Defense
Global Food Laws and Regulation
Success based on key principles

- Flexibility
- Country/market sector ownership and involvement
- Program aligns with country partners’ agenda and using country partners’ systems
- Country partners set the agenda based on needs of the country’s food safety system/market sector
- Country partner identifies/obtains the resources to develop and sustain the program