ScanTech Sciences FAQs

ScanTech Sciences Overview

What does ScanTech Sciences do?

ScanTech Sciences designs, builds, and operates world-class Electronic Cold-Pasteurization™ (ECP™) treatment facilities for food safety and sterilization solutions. Our patented electron beam (E-beam) technology safely and effectively treats food products such as fruits, vegetables, herbs, spices, and ready-to-eat products for insect infestation and pathogen reduction. ECP™ is chemical-free and significantly extends the shelf-life of food products without harming taste, color, odor, texture, or the environment. ScanTech Sciences' patented technology is the game-changing food safety treatment that will replace existing phytosanitary protocols which have proven to be ineffective and pose serious health and environmental risks.

In addition to the ECP™ treatment, ScanTech Sciences' state-of-the-art facilities maintain the cold chain and improve operational efficiencies. Customers receive a comprehensive solution that not only provides effective post-harvest treatment, but also lowers compliance risks and costs. Services include an integrated logistics information platform that provides full visibility, control, and traceability. In combination with the ECP™ treatment, this platform creates value from Food Safety Modernization Act (FSMA) compliance. By eliminating food safety risk, reducing compliance costs associated with the FSMA Foreign Supplier Verification Program, and offering supporting services for the Sanitary Food Transport Act requirements, ScanTech pioneers unprecedented value from leveraging this innovative food safety technology with supporting logistics and information solutions.

What products does ScanTech Sciences treat?

Fruits

Herbs

Ready-to-Eat

Spices

Vegetables

Where is ScanTech Sciences located?

ScanTech Sciences has offices in Atlanta, Georgia and McAllen, Texas. The Rio Grande Valley ECP™ Center is also located in McAllen, Texas. ScanTech Sciences plans to open additional facilities in McAllen, along with other domestic and international facilities, including ports of entry in the Northeast, Southeast, and Western corridors.

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Electronic Cold Pasteurization™

What is Electronic Cold-Pasteurization™ (ECP™)?

Electronic Cold-Pasteurization™ (ECP™) showers food commodities with controlled amounts of high-energy, ionizing electrons that sterilize insects and reduce molds, fungi, bacteria, and pathogens that cause foodborne disease and food spoilage. ECP™ treatment is approved by the USDA and FDA and just as pasteurization makes milk safer, ECP™ makes produce safer.

What are the benefits of Electronic Cold-Pasteurization™ (ECP™)?

When used in conjunction with proper food handling procedures, ECP™ provides:

- **Pest Control**: ECP™ sterilizes unwanted pests such as fruit flies, moths, weevils, mites, worms, maggots, and other borers.
- **Pathogen Reduction**: ECP™ breaks down microorganisms, reducing the presence of foodborne pathogens such as E. coli, Salmonella, and Listeria monocytogenes.
- **Shelf-life Extension**: By reducing bacteria, fungi, and molds, ECP™ delays the spoilage process, thus helping food commodities last longer and extending their expiration dates. For example, ECP™-treated strawberries can last weeks in the refrigerator without developing mold, fungus such as anthracnose can be prevented from spreading, parasites like cyclospora can be eliminated, and fresh-cut produce items last past their typical expiration date.
- **Improved Quality**: Because ECP™ doesn't generate heat, the cold chain is maintained, improving produce quality. Unlike fumigation processes that create temperature abuse, the product can remain in preferred temperatures. ECP™ combined with improved logistics services also increases quality sell-time, which leads to less waste and reduced shrink.
- **Environmentally Safe**: ECP™ is a chemical-free process that replaces fumigation methods and methyl bromide.

What current food treatment methods does ECP™ replace?

- **Fumigation**: Produce is sprayed with chemicals such as methyl bromide and sulfuryl chloride to control for pests. While fumigation is an effective quarantine protocol, it is harmful to the environment, reduces the shelf- life of food commodities, and disturbs natural ripening processes. Methyl bromide is also known as an ozone depleter that is being phased out of worldwide production in compliance with the Montreal Protocol.
- **Hydrothermic (Hot Water Bath) and Hot Air**: Produce is lowered into a bath of hot water or a room of hot air to control for pests. Though these processes are safer than fumigation, they still damage the quality of the commodities because they disturb the cold chain. Hot Water Treatment also increases the probability of exposure to cross-contamination, thus increasing the presence of pathogens in fresh produce.

Are there any side effects of using ECP™?

Electronic Cold-Pasteurization™ (ECP™) does not affect the taste, color, odor, or texture of treated produce. ECP™ has no nutritional effect on the macronutrients of produce and its impact on micronutrients is comparable to other processing or storage techniques including pasteurization, canning, and cold storage.

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Electronic Cold Pasteurization™

Is ECP™ a form of radiation?

There are three types of food irradiation- gamma irradiation, x-ray irradiation, and electron beam (E-beam) irradiation. ECP™ uses a non-nuclear source of E-beam irradiation which has many benefits over the other forms of food irradiation. First, ECP™ is precise – it uses a highly-focused beam of electrons that can be adjusted based on the size, density, or packaging of a product. Second, ECP™ does not require the use of any nuclear or radioactive materials (like Plutonium or Cobalt); therefore, it is a safe, clean process. Third, ECP™ can be immediately turned on and off without any residual effects.

Is food irradiation safe?

The FDA and other public health agencies worldwide have evaluated the safety of irradiation over the last 50 years and have consistently found it to be safe. Scientific studies show that food irradiation does not significantly change the nutrient content, flavor, or texture of food. Irradiation has been endorsed by the American Medical Association, the United Nations' World Health Organization, and dozens of other reputable institutions. Food irradiation is currently conducted in over 40 countries.

Are there any foods currently being treated using food irradiation?

Food irradiation is a common food treatment method. Approximately one-third of spices imported into the United States are irradiated. Many food products consumed by NASA astronauts are irradiated to prevent the likelihood of foodborne illness occurring during space missions. Omaha Steaks and Wegman's currently sell irradiated ground beef. Many tropical fruits, such as guava, dragon fruit, and other imported tropicals are treated using irradiation.

Does irradiation make food radioactive?

There is no risk of irradiated food becoming radioactive. The doses of energy that are employed on the treated products are too low to induce radioactivity. As commodities pass through an irradiation field (the E-beam), the energy passes through the food much like a ray of light passes through a window. This energy destroys most of the bacteria that can cause disease, yet allows food to retain its quality.

What is the Radura?

The Radura symbol is an international symbol of food irradiation: a symbol of quality and safety. The symbol can be displayed in any color.

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Logistics & Information Services

What products does ScanTech Sciences treat?

ScanTech treats sensitive commodities – commodities that are sensitive to pests and pathogens. This includes, but is not limited to:

FRUITS
- Berries
- Citrus
- Stone Fruits

HERBS/SPICES
- Dry
- Fresh

READY TO EAT
- Fresh-Cut
- Bagged Salads

VEGETABLES
- Dry Vegetables
- Leafy Greens
- Root Vegetables

What are ScanTech Sciences' temperature control procedures?

ScanTech Sciences' ECP™ centers are temperature-controlled at 40-41 degrees Fahrenheit so that produce remains at a cool temperature while it is being handled and treated. ScanTech Sciences' ECP™ facilities also has variable temperature short-term storage rooms that are adjusted to the temperature needs of individual commodities if they need to be warmer or cooler.

What containers are safe in ECP™ treatment?

Food commodities can be treated in transport boxes, reusable plastic containers (RPCs) or in a product's final packaging.

Does ScanTech Sciences treat both imports and exports?

The Rio Grande Valley ECP™ Center will treat products traveling southbound into Mexico and northbound into the United States. The facility can also treat imports and exports to and from other countries.

What comprehensive logistics and information services are offered?

ScanTech Sciences works with each of its customers to integrate the ECP™ treatment into a customized logistics program to suit their unique and individual needs. Those services include:

LOGISTICS SERVICES
- Netting
- Shrink Wrapping
- Banding
- Labelling
- Cartonizing
- Pallet Programs
- Cross-Dock Programs
- Short-Term Storage

TRANSPORTATION SERVICES
- Shipment Visibility
- Trailer Sterilization
- Integrated Border Crossing
- C-TPAT Services
- Direct Store Delivery
- Transportation Scheduling (Coming 2018)

INFORMATION SERVICES
- Document Management
- Traceability
- Analytics