Salsa, Pickles, and Other Acidified Canned Foods

A Roadmap to Safe and Compliant Food Production for Very Small Food Processors in Missouri

This resource is intended for educational purposes for very small-scale food processors only and is not a substitute for regulatory review, process authority evaluation, legal advice or food safety plan development.

Product name

Salsa, pickles, and other acidified canned foods

Product description

Acidified foods are low-acid foods to which acid or acidic foods are added to achieve a finished equilibrium pH of 4.6 or below. These products typically have a water activity greater than 0.85. Common examples include pickled vegetables, salsa, relishes, barbecue sauce, and other formulated products. Common acidifying agents include vinegar, citric acid, and other food-grade acids. These foods are commercially processed and packaged in hermetically sealed containers, such as cans or jars. When properly formulated and processed, the lower pH prevents the growth of harmful microorganisms, including *Clostridium botulinum*.

Not all foods marketed as pickles are acidified foods. Lacto-fermented pickles develop acidity through fermentation rather than through the addition of acid. Because fermented foods are subject to different regulatory requirements, they are discussed in a separate guide and should be evaluated by the Missouri Department of Health and Senior Services (DHSS) Manufactured Food Program.

Regulatory classification

Acidified foods, including many salsa and pickled products, are regulated under 21 CFR Part 114 when finished equilibrium pH is 4.6 or below. Unlike jams, jellies, or many baked goods, these products require a validated scheduled thermal process and commercial manufacturing controls to ensure safety.

Is this product allowed under Missouri cottage food law?

No. Acidified foods may not be produced under Missouri cottage food law. Commercial production requires an approved and inspected processing facility, process authority review of the formulation and scheduled process, and specialized training such as Better Process Control School (BPCS).

Food safety hazard that requires special attention

The primary hazard associated with acidified foods is *Clostridium botulinum*, a spore-forming bacterium that causes botulism. In improperly processed products, the oxygen-free environment of a sealed container can allow this organism to grow and produce toxin. Although rare, botulism is one of the most serious foodborne illnesses and can be fatal. Commercial processors control this hazard by using a scientifically validated thermal process established for each product.

Regulatory agencies

- U.S. Food and Drug Administration (FDA)
- Missouri Department of Health and Senior Services (DHSS)
- Local health department or public health authority

FDA regulates commercially processed acidified foods distributed in the United States. Commercial processors must register their facility with the FDA and file scheduled processes for applicable acidified products (FDA Form 2541e).

Processors should contact the DHSS Manufactured Food Program regarding applicable Missouri requirements. Missouri has adopted regulations addressing acidified foods in 19 CSR 20-1.042.

Local public health authorities may impose additional requirements depending on facility location and planned



activities. Producers should contact their local health department before beginning commercial production.

Training and other considerations

- Better Process Control School (BPCS)
- Food safety plan development
- Process authority review
- Inspected (consult DHSS or local food inspector)
- FDA scheduled process filing

Personnel responsible for production of acidified foods should receive training in commercial food processing, acidification, and process control. A qualified process authority must establish a scheduled process for each product. The process identifies the critical conditions necessary to produce a safe food, including acidification procedures, equilibrium pH, processing parameters, container size and type, and other relevant factors.

All food businesses, regardless of size, must identify and control food safety hazards and comply with current Good Manufacturing Practices (cGMPs). Key requirements include employee hygiene and training, sanitation, preventive controls, allergen management, packaging integrity, recordkeeping, and accurate labeling.

Facility requirements

- FDA-registered food canning establishment (FCE)
- Inspected kitchen (consult DHSS or local food inspector)

Many small food businesses begin production in a shared-use or commissary kitchen inspected by the local health department. However, an inspected kitchen alone does not ensure regulatory compliance. Product formulations must undergo process authority review to ensure the product and process are safe. Small-scale producers may also choose to work with a co-packer operating a registered food manufacturing facility. The most appropriate option depends on production volume, marketing channels, and financial considerations. Regardless of the production model, businesses must comply with all applicable regulatory requirements. Wholesale and interstate sales require production in a registered food manufacturing facility.

Testing and recordkeeping recommendations

- Scheduled process documentation
- FDA Process filing documentation
- pH monitoring and thermal process records
- Recipe or formulation records
- Production batch records
- Food safety plan, standard operating procedures (SOPs), and hazard analysis
- Ingredient supplier records
- Equipment calibration records
- Traceability records
- Other applicable production records

Each product must have a scheduled process developed by a qualified process authority. The equilibrium pH of acidified products must be tested, monitored, and documented as described in the scheduled process. The pH measurement equipment must be properly maintained, calibrated, and verified according to applicable requirements. The processor must follow the scheduled process during every production run and maintain records demonstrating that all critical processing parameters were met.

Ingredient and supplier considerations

All ingredients should be obtained from reputable suppliers that comply with applicable federal, state, and local food safety requirements. Whether ingredients are grown on-site or purchased from other sources, the processor is responsible for ensuring their quality and proper handling.

Labeling considerations

- Common name of the food
- Net weight (in U.S. customary units and International System of Units [SI])
- Full name and address of the producer
- Ingredient statement (in descending order by weight)
- Allergen declaration (if applicable)
- Lot coding
- Nutrition facts*
- Storage and handling instructions

Avoid making disease treatment, prevention, or other unauthorized health claims on product labels or marketing materials. Such claims may subject the product to additional regulation and may violate FDA labeling requirements.

*Your business can be exempt from adding a nutrition facts label if you sell a maximum of $50,000 of food to consumers a year or if your total overall sales are under $500,000 a year.

Common producer misunderstandings

- Growing your own vegetables does not exempt you from commercial food processing requirements.
- Not all pickles are acidified foods. Lacto-fermented pickles develop acidity through fermentation rather than through the addition of acid and may be subject to different regulatory requirements.
- If working with a co-packer, ensure that the facility and equipment are suitable for the scheduled process established for the product.

Suggested next steps

1. Determine whether acidified canned food production is appropriate for your business model.
2. Contact the DHSS before investing in equipment or facility upgrades.
3. Identify an approved commercial processing facility or co-packer.
4. Consult with a qualified process authority to establish a scheduled process.
5. Complete required food safety training, including Better Process Control School, when applicable.
6. Complete applicable FDA registration and process filing.
7. Develop required documentation and production records before beginning commercial sales.

Additional resources

Acidified and Low-Acid Canned Foods Guidance,[1] FDA
Current Good Manufacturing Practice,[2] Code of Federal Regulations
Registration of Food Facilities,[3] FDA
Thermally Processed Low-Acid Foods Packaged in Hermetically Sealed Containers,[4] Code of Federal Regulations

Web addresses

1. fda.gov/food/guidance-documents-regulatory-information-topic-food-and-dietary-supplements/acidified-low-acid-canned-foods-guidance-documents-regulatory-information
2. ecfr.gov/current/title-21/chapter-I/subchapter-B/part-110
3. fda.gov/food/guidance-regulation-food-and-dietary-supplements/registration-food-facilities-and-other-submissions
4. ecfr.gov/current/title-21/chapter-I/subchapter-B/part-113

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