Elderberry Jam and Jelly

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

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

Elderberry jam and jelly

Product description

Elderberry jam and jelly are shelf-stable fruit preserves made by cooking elderberries or elderberry juice with sugar, an acidifying ingredient such as bottled lemon juice or food-grade citric acid, and, if needed, pectin to promote gel formation. The mixture is heated until the desired gel consistency is reached and then poured into jars while hot. After the jars are sealed, they are processed in a boiling water bath according to a tested recipe to ensure a safe, shelf-stable product.

Primary food safety hazard that requires special attention

Elderberries are naturally a low-acid fruit. To produce a shelf-stable jam or jelly, the product must be acidified using a validated formulation that effectively controls the primary food safety hazards. Product safety is verified by measuring and documenting a finished equilibrium pH of 4.6 or lower using a validated testing method.

Failure to adequately acidify and thermally process low-acid foods can create conditions favorable for the growth of *Clostridium botulinum*, a bacterium that produces the potent neurotoxin known as botulinum toxin. Consumption of foods contaminated with botulinum toxin can cause botulism, a rare but serious foodborne illness characterized by muscle paralysis and, in severe cases, death, even when the toxin is present in very small amounts.

Raw elderberries, seeds, stems, leaves and other green plant parts contain naturally occurring cyanogenic glycosides compounds that can release cyanide, a highly lethal chemical compound, when consumed. This hazard can be minimized by removing stems and leaves, using only ripe elderberries, and thoroughly cooking the fruit before processing.

Improper formulation, inadequate processing, or seal failure may also allow the growth of spoilage microorganisms, including bacteria, molds and yeasts. Some spoilage microorganisms may produce heat-stable enterotoxins and mycotoxins that cause illness when consumed. For product safety, it is essential to follow validated recipes, verify the target acidity, process jars correctly, and inspect sealed containers before distribution.

Regulatory classification

Processed elderberries are considered an acidified food which has specific requirements. However, the sugar concentration in the recipe reduces the water activity (aw) to 0.85 or below, which is below the threshold at which the primary food safety hazard can grow. As a result, the product is exempt from acidified food regulations, even if acid is added to the formulation.

Primary regulatory agencies

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

Commercial food manufacturers are generally subject to the FDA Food Safety Modernization Act (FSMA) Preventive Controls for Human Food (PCHF) rule. However, exemptions and modified requirements may apply depending on the size of the operation and the intended market. Producers should determine which requirements apply before expanding beyond Missouri cottage food sales.

Is this product allowed under Missouri cottage food law?

Yes. The market channel through which this product is being sold is one of the determinants for whether it qualifies as a Missouri cottage food. Nonpotentially hazardous food products that are sold within Missouri directly to an individual or a restaurant that will consume the product may qualify as cottage foods.

Training considerations

- Hazard analysis critical control points (HACCP)
- Home canning workshop

All food businesses, regardless of size, are required to identify and control food safety hazards in their products and comply with current good manufacturing practices (cGMPs). Foundational food safety requirements include employee hygiene and training, sanitation, preventive controls, allergen management, packaging integrity, recordkeeping and accurate labeling. These practices help ensure the production of safe, wholesome food products.

Although formal food safety training is not required for small food businesses exempt from the FSMA PCHF rule, producers may be expected to demonstrate how they assessed and reduced food safety risks if an outbreak is linked to their products. Home canning workshops and HACCP courses led by authorized food safety experts can help producers identify and manage these risks. A HACCP plan is a key component of a food safety plan.

Facility requirements

- Home kitchen (Missouri cottage foods)
- Inspected food manufacturing facility (required for wholesale and out-of-state markets)

Elderberry jam and jelly may be produced in a home kitchen for direct-to-consumer sales under Missouri cottage food law, provided all applicable cottage food requirements are met. Products intended for wholesale or out-of-state sales must be produced in a licensed, inspected food manufacturing facility meeting Missouri DHSS requirements.

Sugar-free, reduced sugar, sugar-substitute, low-acid and hot pepper jellies are not eligible for production in a home kitchen under Missouri cottage food law.

Although a HACCP plan is not required by Missouri regulations for manufacturers of traditional jams and jellies, implementing a HACCP system is strongly recommended as a best practice. A HACCP plan helps identify potential hazards, establish preventive controls, and promote product safety, quality and consistency.

Testing and recordkeeping recommendations

- Equilibrium pH testing records
- Soluble solids (Brix) testing records
- Recipe or formulation records
- Written food safety plan (including standard operating procedures [SOPs] and hazard analysis)
- Production batch records
- Ingredient supplier records

Although formal process validation is not required for all elderberry jam and jelly producers, maintaining documentation that demonstrates consistent production practices is strongly recommended. Because standardized, research-based formulations for elderberry jam and jelly are limited, producers are advised to use a scientifically supported formulation and retain records of product testing, ingredient sources, production batches, and any changes to the formulation or manufacturing process.

Product testing, including equilibrium pH and soluble solids (Brix), helps verify that the product is consistently manufactured as intended. Producers should maintain product testing documentation and make it available to regulatory authorities upon request, if required.

Producers developing a new formulation or modifying an existing recipe are encouraged to consult a qualified process authority or other qualified food process expert to help ensure the product remains safe and shelf stable.

Ingredient and supplier considerations

All ingredients used in the production of jams and jellies must be obtained from reputable suppliers. Whether purchasing processed ingredients, such as sugar or pectin, or raw agricultural commodities, such as fresh elderberries, producers are responsible for ensuring that their suppliers operating in compliance with applicable federal, state and local food safety requirements.

Labeling requirements for cottage foods

- Common name of the food
- Net weight of the food
- Full name and address of farm or individual producing the food
- Ingredient statement (listed in descending order by weight)
- Allergen declaration, if applicable
- Cottage food statement: This product has not been inspected by the Missouri Department of Health and Senior Services.*

*If a product is sold under Missouri cottage food regulations at a farmers market or similar venue, the vendor must display a placard containing the same cottage food statement required on the product label. Products intended for wholesale distribution or interstate commerce must be produced in an properly permitted and inspected commercial food processing facility and comply with all applicable federal, state and local labeling requirements.

Additional label best practices

- Date manufactured
- Lot coding for traceability
- Nutrition facts

Do not make disease treatment, disease prevention or other unauthorized health claims on product labels or in marketing materials. Such claims may subject the product to additional regulatory requirements and could violate FDA labeling requirements.

Common producer misunderstandings

- Not all elderberry jams and jellies qualify under cottage food law. Only traditional products made with standard recipes are eligible. Sugar-free, reduced-sugar, sugar-substitute and low-acid canned foods are not eligible.
- Elderberries are not naturally high-acid. A scientifically validated formulation is needed to produce a safe, shelf-stable product.
- Recipe changes can affect product safety. Changes to ingredients, acidification, sweeteners or processing methods should be evaluated before commercial production.
- Documentation matters. Product testing and production records help demonstrate consistent manufacturing practices and may be requested by regulators.

Suggested next steps

1. Develop the product using a scientifically supported formulation.
2. Confirm that the finished product meets applicable safety standards, such as equilibrium pH below 4.6 and soluble solids above 65 Brix, and maintain product testing records for each batch produced.
3. Produce the product in a sanitary and appropriate environment following current good manufacturing practices (cGMPs), and maintain production records for each batch.
4. Verify that the label complies with Missouri and federal requirements.
5. Sell the product.

Food safety tips for preparing and storing elderberry jam and jelly

- Use only properly identified, fully ripened elderberries. Remove and discard all stems, leaves and green berries.
- Thoroughly cook the fruit before making the jam or jelly.
- Use a scientifically supported formulation, and follow current good manufacturing practices.
- Test the acidity of each batch with a calibrated and reliable pH meter, and maintain records for each batch.
- Use tested canning methods, and ensure jars, lids, utensils and equipment are sanitary and new lids are used when required.
- Store finished products in a clean, dry, pest-free, temperature-controlled space.

Additional resources

Current good manufacturing practice, Code of Federal Regulations (ecfr.gov/current/title-21/chapter-I/subchapter-B/part-110)

Missouri Home-Based Kitchen Food Production Guidance (PDF), Missouri DHSS (health.mo.gov/sites/health/files/media/pdf/2026/03/home-based-kitchen-food-prod-guidance.pdf)

National Center for Home Food Preservation, University of Georgia (nchfp.uga.edu)

Understanding FSMA: HACCP, HARPC and the Preventive Controls for Human Food Rule, Penn State Extension (extension.psu.edu/understanding-fsma-haccp-harpc-and-the-preventive-controls-for-human-food-rule#section-19)

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