Oilseed Fact Sheet: Processing Regulations

Introduction

Are you considering producing edible oils for public consumption as a small-scale oilseed processor? If so, then this factsheet is a good place to start. The main focus of this factsheet is to present the regulations and requirements in terms of safety and sanitation for small-scale producers who would like to process edible oils from oilseed.

Reasons for Cleanliness

There are many reasons why the regulations currently in place are important. Since the oils produced are for general consumption, they need to meet the expectations of food production found in any food industry. Diseases and harmful materials, if not protected against, can contaminate the product and endanger the health of customers. As well as giving an operation a bad name in the industry, this can also cause a variety of legal problems which may end in fines or other legal consequences.

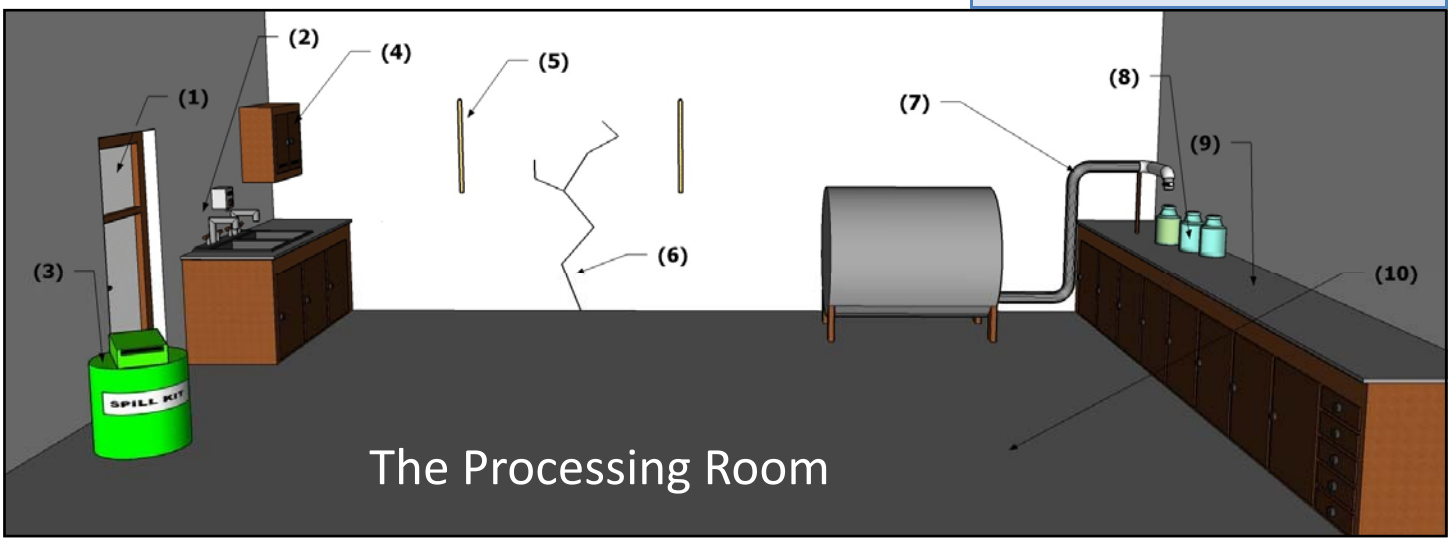
This factsheet details the different aspects of cleanliness in the workplace when it comes to the processing of edible oils, such as:

- Workplace surfaces
- Personal cleanliness
- Bottling and labeling
- Pest control
- Permitted construction materials

Production Area Requirements

When determining the best location for the production area, size is an important factor. The production area should be big enough to have plenty of space for the equipment and materials. It should also be spa-

Processing Room Legend	
(1)	Door with screen to prevent pests
(2)	Sink for hand washing
(3)	Spill kit for dealing with spills
(4)	Disposable gloves and hairnets
(5)	Fly paper away from processing equipment
(6)	Cracks caulked and sealed
(7)	Pipes smooth and made of washable
(8)	Bottles labeled properly
(9)	Counter made of appropriate materials
(10)	Floor smooth and clean



The Processing Room

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cious enough to allow for ease of cleaning resulting in a sanitary operation. Equipment and material placement should be unobstructed and allow for safe movement around the area.

The floors, ceilings, and walls should be constructed of smooth surfaces which are easy to clean, and should be kept clean and in good condition. Any surfaces in contact with the product should be smooth as well, and resistant to decay from normal processing and cleaning procedures.

To prevent accidents involving glass objects, it is important to protect any and all glass objects such as windows, lighting, and bottles. Replace as many of these objects as possible with shatter-proof materials. This would include materials such as polycarbonate, lexan, or tempered glass.

It is important that fixtures in the production area also do not contaminate the product. This means installing fixtures such as lighting, ducts and pipes so that condensation doesn't drip onto the product at any stage of its production. On the same note, lighting and ventilation should be adequate, keeping the workplace well lit with a good airflow.

Drainage and Sewage

It is important that the water supply and drainage systems are of sufficient quality to allow ease of cleaning and sanitation. It is required that the production area contain a handwashing sink near the entrance, with water of between 100 and 120 degrees Fahrenheit. Floor drains and sewage systems should also be adequate for sanitary operation and proper cleaning of the facility and equipment, as well as promoting good personal cleanliness in the employees. Floor drains may also be a good idea in case oil is spilled and begins to pool.

Restrooms are an important feature which should be within a reasonable distance of the production area. They should contain a sink used only for hand washing, and should have running warm water for that purpose. It is important that the restroom be constantly stocked with disposable hand towels, hand soap, and toilet paper. Any restroom should contain a sign which details the proper hand washing methods, and serves as a reminder to wash hands after every contact with unsanitary materials.

Equipment and Handling

The equipment in the processing area in contact with the product, such as processing, holding, transferring, and filling equipment should be designed for their intended purpose, and should be of the proper quality and materials to prevent corrosion. Preferred materials include PVC piping, polished stainless steel, and other food grade plastics. Materials not recommended are copper, brass, and galvanized metals.

The surfaces in contact with the product should be smooth, to prevent buildup and lubricants contaminating the product. They should also be free of dirt, and be accessible to cleaning. Cleaning and sanitation should be done on a regular basis.

Employee Regulations

When ensuring that the processing area meets sanitation standards, it is not just the facility that must meet standards. Anyone coming into contact with the product or the raw materials needs to maintain a level of cleanliness and protocol.

Personnel involved in the manufacturing of the product, or supervising its production, need to be properly trained to perform their tasks safely and with food safety practices in mind. Personnel involved in contact with the raw or finished product must follow certain regulations regarding clothing. These are:

- Personnel must remove jewelry

An example of a hand washing sink with proper signs reminding workers to wash hands after contact with any contaminants.

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This is an example of a dispenser for hair and beard nets, which allows ease of access and promotes cleanliness in the workplace.

before coming into contact with the product, as jewelry can fall into and contaminate it

- Clothing must be appropriate to maintain cleanliness and prevent contamination
- Hair nets must be worn on long hair and facial hair, to prevent it from falling into the product
- Torso hair must be appropriately covered– shirts must be buttoned or closed all the way

Lab coats are a preferable and sanitary outer wear to consider when working with the product, as they provide coverage and prevent contamination.

Not only must personnel wear the appropriate clothing, but they must also maintain a level of personal hygiene expected in a food processing environment. Personnel must properly wash hands before each shift, after using the restroom, and any time they come into contact with contaminants.

Food, drink, and tobacco products must be prohibited from the processing area. No smoking is to be allowed in the processing area, and eating and drinking is to be done in appropriate areas away from the product and raw materials.

Raw Material Handling

The materials used in processing and packaging of the product, such as the oilseed and the bottles the product will be stored in, must be stored properly prior to and after use. They must be stored above the ground, away from pests, excess moisture, and contaminants. Contaminants include microorganisms and chemicals, as well as dirt and other unwanted materials.

They must also be properly labeled and separated, to prevent mix-ups. Bags and containers must be closed when not in use, and kept away from exposure to heat, cold, light and moisture which might damage or decompose them.

Chemical Containment and Regulations

The facility used in processing of oilseeds into food products may require a number of chemicals to aid in production and sanitation. These include such materials as:

- Cleaning compounds
- Lubricants
- Pesticides
- Fuels
- Sanitizing compounds
- Other chemicals as needed

These materials are considered toxic when working with food, and should be stored separately from the processing area. Their storage area should be secure, and be labeled properly. Chemicals inside this area should be properly labeled and stored safely, in their appropriate containers. Any cleaning agents must be used as their labels describe; only sanitizers approved by the EPA are allowed for use in the processing area, and must be used according to their labels.

Regulation Administration

Regulations for food safety and processing are found under Title 21 of the Federal Code. A link to the code is found in the references section of this factsheet. These regulations are in turn administered and supplemented

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by state legislation, usually under the state department of agriculture.

To apply for a license to process oil for general consumption in Pennsylvania, use the link to the Pennsylvania Department of Agriculture (PDA) found in the references section.

Summary

The safety of food production is important, not just for meeting regulations, but for producing a quality product which sells well and brings customers back. When considering the facility in which the oil will be produced, many things matter, such as equipment, space, sanitation, and worker cleanliness. This factsheet reviews these important factors, so that the potential small-time food oil producer can set up a clean, safe, and functional workspace.

Resources

Penn State food science food entrepreneur site:

http://extension.psu.edu/food/entrepreneurs/starting-a-business

Penn State University Creamery Good Manufacturing Practices (to use as a reference):

http://creamery.psu.edu/plant/dairy-plant-food-safety-plans/Creamery-GMPs.pdf/view

PA Department of Agriculture licensing page (for applying to get a license):

http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_24476_10297_0_43/http%3B/10.41.0.77/AgWebsite/ProgramDetail.aspx?name=Wholesale-Food-Processing-Manufacturing-and-Distribution&navid=12&parentnavid=0&palid=57&

US Drug and Food Administration Code of Federal Regulations Title 21:

http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=110

Vermont Department of Health Regulations for Food Service Establishments:

http://healthvermont.gov/regs/03food_estab.pdf

Note: This is not a comprehensive list of resources on food processing regulations. For more information, contact your county sanitarian.

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