

Safety during emptying and cleaning of fryers

HSE information sheet

Catering Information Sheet No 17

Introduction

This information sheet was produced by the Hospitality and Catering Industry Liaison Forum, which has members from trade and professional associations, unions and enforcement authorities. Members' associations are free to reproduce and distribute this guidance to catering establishments. The guidance is issued by the Health and Safety Executive.

This sheet provides advice to employers in the catering industry on safe emptying and cleaning of fryers. It gives guidance on manual emptying and cleaning and guidance on fryers with automated or semi-automated filtering (using enclosed portable filtering units).

Automated and semi-automated filtering processes avoid operators coming into contact with hot oil, significantly reducing the risks. This enables filtering to take place safely even while the oil is at normal cooking temperature. Most automated or semi-automated systems require an oil temperature of at least 100 °C for the filtering process to work effectively.

You should only carry out manual emptying and filtering of fryers when the oil has been cooled to 40 °C or below.

Key messages

- Burns from hot oil can be very serious.
- Oil takes only 6-7 minutes to heat up but can take 6-7 hours to cool down again.

What the law says

The Health and Safety at Work etc Act 1974 places a duty on employers to ensure, so far as is reasonably practicable, the health, safety and welfare of their employees. This duty extends, amongst other things, to providing and maintaining systems of work which are, so far as is reasonably practicable, safe and without risks to health. The Act also places a duty on employees to take reasonable care of their own and others' health and safety.

Whichever type of fryer is used, it is essential that:

- you make sure the fryer is well maintained and any attachments used are suitable for their purpose, as recommended by the manufacturer;
- you have a procedure for reporting faults;
- you clean up oil spillages immediately, and ensure floor areas around equipment are completely clean and dry to avoid slip risks;
- you train staff in safe procedures for emptying and cleaning;
- you provide staff with suitable protective equipment, where required by the risk assessment, eg eye protection, heat-resistant gloves, aprons.

When to empty and clean

Many catering establishments are closed overnight. For fire safety and economy, switch off fat fryers when unattended. Carry out oil filtering and cleaning as a **first task of the day** rather than as part of the closing-down procedure.

Hazards

The hazards in emptying and cleaning fryers include:

- fire;
- burns from hot oil;
- contact with hot surfaces;
- fumes from boiling cleaning chemicals;
- boiling chemicals overflowing;
- eye injuries from splashes;
- slips from oil spillage;
- strains and sprains from lifting and moving containers of oil.

If the catering service runs for 24 hours and the appliance is required continuously, there are two safe options:

- use more than one fryer and clean them in rotation;
- use an automated filtering system or a semi-automated portable filtering unit that removes the hot oil directly from the fryer, filters the oil and holds it safely.

Automated and semi-automated filtering

Automated filtering systems

An automated system consists of an inbuilt oil filtration system. The oil is drained into an enclosed reservoir and an electric pump circulates it through a filter system and internal pipework back into the fryer. Since this process is enclosed within the equipment, the operator does not come into contact with hot oil, greatly reducing any risk.

Portable oil filtering units (semi-automated)

These units are not part of the fryer, but sit alongside it. The operator attaches an extension pipe to the fryer and the hot oil is drained into an **enclosed** container within the portable unit. The oil is then filtered and returned to the fryer.

If you have a fryer with automated oil draining system or a portable oil filtering unit, refer to the manufacturer's guidelines for draining/filtering temperatures and safe operational requirements.

These, together with your own risk assessment, will determine the need for suitable protective equipment. If there is still a risk from contact with hot surfaces or oil splashing, you may need to provide staff with eye protection, a protective apron and/or heat-resistant gloves/gauntlets.

Manual oil filtering

This involves the operator draining the oil from the fryer, through a filter, into a suitable metal holding or heat-resistant, hard, plastic container and manually lifting it back into the fryer (fryer oil is often supplied in hard, plastic, rigid containers). Serious accidents have occurred where oil that has not sufficiently cooled has been drained back into an empty plastic container and the base of the container has given way.

To drain oil safely and in the correct sequence, follow these guidelines:

- Turn off the appliance and the power supply at the wall socket for electric appliances, and the on/off control for gas appliances.
 - Allow the oil to cool, ideally for at least six hours, and check the temperature, using a suitable probe thermometer before draining. Do not drain if the temperature is above 40 °C.
 - Follow the manufacturer's instructions and use the correct equipment (eg a detachable spout for the type of fryer you are emptying), making sure to bring any equipment you need to the fryer before you start.
 - Depending on the type of fryer, drain the oil by drain valve, removable spout, lifting container or by tilting.
- If the oil is too cold to drain easily, reheat it briefly and agitate with the fryer basket (for no more than one minute). Switch the appliance off and check the temperature again before emptying.
 - Using a filter, run the oil into a suitable metal holding or heat-resistant, hard, plastic container. These containers will generally need carrying handles and a cover or lid. Before moving, make sure that the lid or cover is secure.
 - Make sure the container is empty and big enough to take the volume of oil being drained at any time.
 - When you are draining large volumes of oil, it is safer to drain off in smaller amounts. This avoids overflowing the container and will reduce the chance of spillages when you move it. Smaller amounts will also be easier to carry.
 - Place the container in a safe place where it cannot be contaminated with chemicals, water or foreign bodies. Place the container on top of a drip tray to avoid any floor contamination.
 - Do not dispose of waste oil down the drain – disposal must comply with environmental legislation.
 - Clean up any spillages **immediately**.
 - Make sure floor areas around equipment are completely clean and dry to avoid slip risks (see also *Preventing slips and trips in kitchens and food service*).

Other precautions

Make sure the design of the drain-off tap prevents it being turned on accidentally:

- mark clearly on it that the tap should not be touched;
- place warning signs near the tap;
- if possible, remove the tap handle when the fryer is switched on.

Cleaning procedure

This section applies to all types of fryers:

- Turn off the appliance, and the power supply at the wall socket for electric appliances and the on/off control for gas appliances.
- Wear suitable protective equipment, including eye protection (if appropriate).
- Check that other activities will not be put at risk by the cleaning activity.
- Check that the oil has been thoroughly drained and that there are no spillages that may cause slipping.
- Remove loose debris from the internal surfaces.
- Thoroughly wash all internal and external surfaces with suitable cleaning chemicals and check for any leaks.

- For stubborn residues, fill the fryer with your recommended cleaning agents and leave or simmer according to instructions.
- Do not leave the fryer unattended or allow it to boil as this may cause it to cascade liquid onto the floor, causing additional scalding and slipping hazards.
- Drain the appliance and rinse thoroughly with plenty of water.
- Dry all internal surfaces and make sure there is no water left in the fryer.
- Check the drain valve is closed and working properly, then refill and switch on as required.
- When refilling the fryer with oil, the oil container may be too large or heavy for one member of staff. Where possible, use smaller containers.
- Do not overfill the fryer. Follow the manufacturer's guidelines.
- Clean up any spillages **immediately**.
- Make sure floor areas around the equipment are completely clean and dry to avoid slip risks.

Training

This section applies to all types of fryers:

- Make sure only staff trained in the safe use of the cleaning chemicals and cleaning procedures for the fryer do this task.
- Train staff in reporting procedures, if they find the equipment is faulty, or if they have experienced any practical difficulties with cleaning the fryer in their specific work environment.
- Make staff aware of the reasons for using suitable protective equipment, ie gloves, eye protection.
- Complete risk assessments for hazardous chemicals and make staff aware of the correct procedures for using cleaning chemicals.
- Make safety data sheets available to staff.
- A short, written procedure can act as a reminder to staff for both draining and cleaning operations.

Further information

Preventing slips and trips in kitchens and food service Catering Information Sheet CASI6(rev2)
HSE Books 2012 www.hse.gov.uk/pubns/cais6.htm

HSE has produced a suite of Catering Information Sheets and other guidance for the catering and hospitality industry. These are available on the HSE website at www.hse.gov.uk/catering/index.htm.

There is also helpful advice in *Health and safety made simple: The basics for your business* www.hse.gov.uk/simple-health-safety/index.htm.

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This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This document is available at: www.hse.gov.uk/pubns/cais17.htm.

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