Safety during emptying and cleaning of fryers

Catering Information Sheet No 17(revision 2)

Introduction

This information sheet advises on safety during emptying and cleaning of fryers. It includes guidance on manual emptying and cleaning, and on fryers with automated or semi-automated filtering (using enclosed portable filtering units).

Automated and semi-automated filtering processes avoid the need for the operator to come 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. In any case, most automated or semi-automated systems require an oil temperature of at least 100 °C for the filtering process to work effectively.

Manual emptying and filtering of fryers should only be carried out when the oil has been cooled to 40 °C.

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 (ie 60 times slower).

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

- staff are trained in safe procedures for emptying and cleaning;
- staff are provided with suitable protective equipment, where required by the risk assessment, eg eye protection, heat-resistant gloves, aprons;
- the fryer must be well maintained and any attachments used must be suitable for their purpose, as recommended by the manufacturer;
- any oil spillages must be cleaned up immediately, ensuring floor areas around equipment are completely clean and dry to avoid slip risks.

When to empty and clean

Most catering establishments are closed overnight for at least eight hours. For fire safety and economy, fat fryers must be switched off when unattended. It is best practice for manual oil filtering and cleaning to be carried out as a **first task of the day** rather than as part of the closing-down procedure.

Hazards

Hazards connected with emptying and cleaning fryers include:

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

If a 24-hour service is offered 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 semi-automated portable filtering unit that removes the hot oil direct 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 pipe work 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 as above and returned to the fryer.

If you have a fryer with an automated oil draining system or a portable oil filtering unit, you should 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 require 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 drain bucket or container and manually lifting it back into the fryer.

Rules for draining oil safely and in the correct sequence can be based on the following guidelines:

- Turn off the appliance, and turn off the power supply at the wall socket for electric, and the on/off control for gas.
- 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 any manufacturers instructions and use the correct equipment (eg a detachable spout for the type of fryer being emptied), making sure any equipment required is brought to the fryer before the process starts.
- Depending on the type of fryer, oil will be drained 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 (using a suitable probe thermometer) 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 that the container is empty and big enough to take the volume of oil being drained at any time.
- When large volumes of oil are being drained, it is safer to drain off in smaller amounts. This avoids overfilling the container and will reduce the chance of spillages when it is moved. 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* Catering Information Sheet CAIS6(rev1) HSE Books 2005).

Other precautions

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

- mark the tap clearly that it 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 may apply to all types of fryers:

- Turn off the appliance, and turn off the power supply at the wall socket for electric and the on/off control for gas.
- Make sure suitable protective equipment is worn, 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 the fryer 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, some help may be required if the oil container is 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 may apply to all types of fryers:

- Only staff who have been trained in safe use of the cleaning chemicals and cleaning procedures for the fryer should be allowed to do this task.
- Staff should be trained in the reporting procedures if they find the equipment to be faulty.

- Staff should be made aware of the reasons for use of suitable protective equipment, ie gloves, eye protection.
- Risk assessments should be completed for hazardous chemicals and staff should be made aware of the correct procedures for the use of cleaning chemicals. Safety data sheets should be available to staff.
- A short, written procedure can act as a reminder to staff for both draining and cleaning operations.

Further reading

Preventing slips and trips in kitchens and food service Catering Information Sheet CAIS6(rev1) HSE Books 2005

Planning for health and safety when selecting and using catering equipment and workplaces Catering Information Sheet CAIS9 HSE Books 1997

Maintenance priorities in catering Catering Information Sheet CAIS12 HSE Books 2000

Manual handling in the catering industry Catering Information Sheet CAIS13 HSE Books 2000

Safe use of cleaning chemicals in the hospitality industry Catering Information Sheet CAIS22 HSE Books 2003

While every effort has been made to ensure the accuracy of the references listed in this publication, their future availability cannot be guaranteed.

Further information

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

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