TESTING MICROWAVE OVENS

Why do we have to test Microwave Leakage?

Microwave ovens can be heavily used and sometimes abused in a busy kitchen catering for a number of staff and customers. They can in time become damaged and even corroded, if not looked after properly.

It is not unusual to see microwave ovens with broken door hinges, damaged or missing door seals, broken door catches or even cracks to the door glass.

Whilst these ovens are designed and manufactured to operate normally and seal in the Microwaves, it is important that there are no gaps in this metallic seal.

When injury from exposure to microwaves occurs, it usually results from dielectric heating induced in the body, the same heating that cooks food. Exposure to microwave radiation can produce cataracts by affecting the lens in the eye. Exposure to heavy doses of microwave radiation (as from an oven that has been tampered with to allow operation even with the door open) can produce heat damage in other tissues as well, up to and including serious burns which may not be immediately evident because of the tendency for microwaves to heat deeper tissues with higher moisture content.

The Management of Health & Safety at Work Regulations 1999 states:

"Every employer shall make suitable and sufficient assessment of the risks to the health and safety of his employees to which they are exposed whilst at work"

The Provision and Use of Work Equipment Regulations 1998 states:

"Every employer shall ensure that work equipment is maintained in an efficient state, in efficient working order and in good repair."

The Electricity at Work Regulations 1989 states:

"As may be necessary to prevent danger, all systems shall be maintained so as to prevent, so far as reasonably practicable, such danger."

The only way to make sure that the microwave oven is working safely is to check its leakage.
How we do we test Microwave Ovens?

A large mug of water is placed in the microwave oven which is then put on maximum power for a minute. A suitably calibrated Microwave Checker is then used to scan the door seals and the front glass. This will indicate if the level of Microwaves leaking out is within an acceptable safe level which is 5 mw/sq. cm

**Note:** There are many cheap testers that claim to be able to test Microwave Leakage. Most of these are not calibrated to the correct level and may **FAIL** working Microwave Ovens or **PASS** faulty ones. Make sure that you buy a professional Microwave Leakage Checker that has been properly calibrated. If in doubt ask the supplier for a calibration certificate.

Microwave ovens are designed to switch off instantly as soon as the door is opened. It is very important to check that this is working. Finally the oven has to be labelled appropriately to show that both the leakage and the interlock tests have been carried out.

Microwave Leakage Checker from First Stop Safety

This checker is very easy to use and can check the leakage from a Microwave within a few minutes.

The unit has the following features:

- RF measurement range from 0.07 mw/sq cm to 7.1 mw/sq cm
- 10 LEDs to show level in this range
- 5 cm spacer built into the product for easy measurement
- Easy to read red/amber/green indication
- Simple push button operation
- Power On indication
- Battery Low indication
- 25 "RF Emission Tested" and 5 "Failed" labels included

First Stop Safety  
11 Glaisdale Road  
Northminster Business Park  
York, YO26 6QT

Tel: 01904 791050  
Fax: 01904 352225  
sales@firststopsafety.co.uk  
www.firststopsafety.co.uk

15th April 2009