

<b>HACCP</b> <i>Europa.com</i>	<b>QUALITY SYSTEMS MANUAL</b>	<i>Issue: 1</i>	<i>Ref No:</i>
		<i>Issued by:</i>	
	<b>Calibration Management</b>	<i>Approved by:</i>	
		<i>Issue date:</i>	
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**SCOPE:** This procedure applies to employees who handle, prepare, or serve food.

**PURPOSE:** To ensure that the equipment used to measure parameters of product identified in the inspection and process procedures is accurate to the required level of uncertainty.

**RESPONSIBILITY:** It is the responsibility of the management to ensure that the following procedures are adhered to and understood by all relevant personnel and the personnel follow State or local health department requirements.

The Manager is responsible for identifying the equipment to be calibrated, and deciding upon the accuracy and frequency required.

#### **INSTRUCTIONS:**

#### **Calibration Plan**

<b>Equipment</b>	<b>I.D.</b>	<b>Accuracy</b>	<b>Operation Range</b>	<b>Calibration Frequency</b>	<b>Responsibility</b>	<b>Functional Checks</b>
Thermometers	See Temperature probe calibration log	+/- 0.5°C	-60°C to +199.9°C	Annual	Manager	Weekly
Scales	See weight scale calibration record	+/- 1g	1g to 30kg	Annual	Manager	Daily
Water Bath		+/- 0.01C	0°C – 65°C	Annual	Manager	N/A
Metal Detector		See Cert	See cert	Annual	Manager	Daily

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### Calibration Procedures

External sub-contractors who comply with the following requirements calibrate all scales, thermometers, water baths, and weights:

1. All equipment is calibrated according to documented procedures.
2. All personnel are trained.
3. All equipment used is traceable to a national standard.
4. The equipment is calibrated over its operation range.
5. The equipment is calibrated to the required accuracy.

An external contractor, the manufacturer or distributor must calibrate the equipment at least once each year.

### Functional Checks

#### Thermometers:

The thermometers shall be calibrated at two temperature ranges, ambient and chill. One sample of water shall be stored in the 1°C chill and the other sample of water kept in the ambient area.

1. The calibration bath is filled with water.
2. The probe(s) to be checked are placed in the calibration bath.
3. The probe(s) are allowed to settle and the readings are then taken.
4. Both results are filled in on Thermometers Functional Check Log.
5. This method is to be repeated for both Chill and Ambient.
6. Where the readings differ by less than 0.5°C, a label is placed on it stating the inaccuracy that may be added or taken away from the reading. Where the thermometer is out of calibration by more than 0.5°C, the thermometer is sent to the sub-contractor for calibration.

If water bath is not used in calibration the calibration method must be followed:

#### Cold temperature testing

1. Pour a mixture of 50% crushed ice and 50% water into a suitable container.
2. Let the mixture stand for a period of 5 minutes to allow the temperature of the mixture to become evenly distributed.
3. Place the probe of the thermometer into the mixture.

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4. Wait for approximately 2minutes.
5. Write down the reading of the thermometer. It should read 0°C.
6. Where the readings differ by less than 0.5°C, a label is placed on it stating the inaccuracy that may be added or taken away from the reading. Where the thermometer is out of calibration by more than 0.5°C, the thermometer is sent to the sub-contractor for calibration.

#### Hot temperature testing

1. Boil tap water and place the thermometer temperature probe into the boiling water.
2. Wait for a few minutes to allow the temperature to stabilise.
3. Write down the temperature of the thermometer. It should read 100°C.
4. Where the readings differ by less than 0.5°C, a label is placed on it stating the inaccuracy that may be added or taken away from the reading. Where the thermometer is out of calibration by more than 0.5°C, the thermometer is sent to the sub-contractor for calibration.

#### Scales

1. Place the required weights on the scales. Check that the reading is accurate to the required level and that the scale is level to ensure an accurate reading.
2. Where a scale is found to be out of calibration by more than the allowed tolerance, 3 units checked on that scale are re-weighed. If any of the units are found to be lightweight, all the units weighed on the scale on that day are re-weighed.
3. The affected scales must be marked 'Out of Calibration' and returned to the sub contractor for calibration.
4. Record the results on Scales Functional Check Log.

#### Metal Detector

Refer to Metal Detection manual

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**Maintenance of Measurement and Test Equipment**

1. Handheld thermometers are stored in controlled access area.
2. It is the responsibility of the Manager to maintain all calibration equipment and to ensure current certificates of calibration or conformance are held on file.

**MONITORING:**

1. A designated employee will inspect that each employee is following this SOP.

**CORRECTIVE ACTION:**

1. Any employee found not following the procedures in this SOP to be retrained.
2. Follow the corrective actions as per instructions above.

**VERIFICATION AND RECORD KEEPING:**

1. The manager will verify that employees are following this SOP by visually observing the employees during all hours of operation.
2. The manager will verify Functional Checks Log daily by initialing logs.
3. The manager will complete the Food Safety Checklist daily.

**RECORDS APPLIED TO THIS PROCEDURE:**

- Food Safety Checklist
- Functional Check Logs

**DOCUMENTATION RETENTION:**

The records applied to this procedure are to be kept on file for a minimum of 3 years.