

CALIBRATION IN FOOD & BEVERAGES

It is commonly known that within the Food and Beverage Industry, much testing occurs to ensure that food and drinks smell and taste good. Whilst much of this testing can be considered subjective, a range of instruments are utilised in the production, storage and distribution processes. These are used to objectively measure various factors that are critical to guarantee food and drinks not only taste good, but are safe to eat.



An area often not thought about however is the calibration of these instruments, that enable food and beverage manufacturers to produce food and drinks that are high in quality as well as safe to consume.

The Food Standards Agency (FSA) is responsible for food safety and food hygiene in England, Wales and Northern Ireland. It works with local authorities to enforce food safety regulations and check the standards are being met, including accurate instrument calibration.

In the food and beverage production process, factors such as weight, volume, temperature and moisture needs to be accurately measured in order for manufacturers to clean, treat and preserve food and drink as well as maintain high quality. If accuracy is not achieved, products can be unsafe for consumption, therefore placing consumers at risk.

DID YOU KNOW?

As a range of factors need to be accurately measured within the Food and Beverage Industry, a number of different types of equipment must be calibrated. For example pH meters are used to monitor fermentation in low acid and acidified products, thermometers are used for gauging food temperatures and weight scales are used to monitor the input of ingredients to ensure regulations and limits are adhered to. All of these devices will require calibration to maintain their ability to produce accurate measurements.

However, over time as Measuring Equipment is used, it will begin to lose its accuracy as it becomes susceptible to factors such as wear and tear. Inaccurate readings can result in large financial consequences for businesses.

British grocery retailer Tesco had to recall 70,000 packs of their own brand Garlic Bread in 2015, after an investigation found that some were underweight. One 290g pack was recorded as having a net weight of 229.8g – about 20% lighter than stated. In total £93,000 of stock was recalled.

This highlights the importance for professionals within the Food and Beverage Industry to ensure that the equipment used in the production process are calibrated regularly.

THE BENEFITS OF CALIBRATION

Regularly calibrating equipment will minimise any measurement uncertainty and ensure that the equipment is functional, thus providing an accurate output in accordance with the regulatory standards.

After the calibration is complete, a calibration certificate is supplied by the service provider, which provides assurance that the equipment is working properly as well as demonstrating the standards used.

The Calibration of measuring equipment within the Food and Beverage Industry has a wide range of benefits. For example, it allows food and drink manufacturers to produce high quality products which are safe for consumption, as well as ensuring that the right quantities of food and drink in the production process which allows them to reduce waste and decrease costs.



WHEN SHOULD EQUIPMENT BE CALIBRATED?

The answer to this question will vary depending upon application.

Below are some useful calibration frequencies to consider.

Manufacturer's Recommendation

**When your organisation
requires a valid calibration
certificate**

**Annually, Biannually,
Quarterly, Monthly**

**Before/After an important
event, project or test**

**After an accident involving
your equipment**

WHO SHOULD RECALIBRATE YOUR EQUIPMENT?

When it comes to choosing which Calibration Service Provider, you should consider the following:

Laboratory Accreditation: Accreditation drives confidence in all sectors by underpinning quality of results, ensuring their traceability, comparability and validity. UKAS is the National Accreditation Body for the United Kingdom. A UKAS accreditation ensures the highest levels of impartiality and competence through the continuous assessment process.

On-site or Back to Base: Can the provider calibrate your equipment on-site as well as at their own location?

Reputation and Values: A brand's reputation and values are indicative of the quality of service you will receive. As the importance of calibration has been established, it is crucial to select a service provider with strong values closely aligned with delivering a professional and transparent service as well as a provider with strong experience within the calibration field.

Price: Price is a major factor which influences most if not all purchasing decisions. In regards to calibration, it is important to not only compare pricing between providers, but to also examine what is included in the service of different providers. It is also important to identify whether there are any hidden costs.

Turnaround Times: It is essential to select a service provider who is able to calibrate your equipment on time so that you keep in line with your own standards. Providers differ on the times in which they are able to calibrate your equipment.

Customisable Service: Choosing a provider who allows you to personalise your service offering is key to receiving the most suitable service you require.

WHO CHOOSE EUROPEAN INSTRUMENTS?



European Instruments are able to perform on-site or back to base Balance, Scale, Weight, and Pipette Calibrations. We offer three different service levels when it comes to calibrating your equipment ranging from UKAS Calibration for those who require traceability to international standards all the way to 'QuickCal' designed for those who may not require extensive measurements & calibration. We're also able to develop a personalised test plan for you to suit your calibration requirements whilst maintaining fast turnaround times.

We also do not set a minimum daily charge on our calibration jobs and offer a competitive rate.

We understand that booking calibration services can be a daunting task. This is due to the complex terminology and wide array of service specifications that need to be taken into consideration, to ensure you remain compliant with your organisations standards. However, because we're an independent organisation with highly experienced staff, we strive to help you pick out the most suitable calibration services for your individual requirements.

We strongly believe it's this transparent approach coupled with our unmatched experience, which makes us the best choice for your next Calibration.