

Training Services – Basic Weighing

Much attention in laboratories today is focused on the instruments in use, ensuring it is fit for the purpose, maintained and calibrated to national or international standards. There is a good reason for this as it helps ensure the reliability of your data. However, little emphasis is placed on the operator their understanding of weighing and the way they use the instrument. Poor weighing technique & understanding can have the same affect of using un-calibrated equipment i.e inaccurate non repeatable results.

Suitability

This course has been designed for those who need to develop an understanding of the basic concepts in weighing. Courses on advanced subjects in weighing are available on request. It will suit lab workers who are using balances on a routine basis who need to know how to correctly use the weighing instrument and understand the key subject areas relating to weighing.

Course Structure:

The course is designed with flexibility in mind to ensure that we provide exactly the training the customer requires. This means we can arrange the course to take place either at our Oxford office or at the customer premises. On completion of the course each person will receive a certificate of training.

It is structured as follows :

1) About Your Balance?

We estimate that 90% of customers only use their balance for weighing, this is fine if it is through choice, but modern balances are capable of much more. This section will bring to your attention to what modern balance can do.

Subject Headings

- How your balance works
- Calibration Drift
- Interfacing your balance
- Internal Calibration
- Printing hard copies of your results
- Environmental filters
- IP Rating
- Care & Cleaning
- Balance Identification

2) Weighing Performance

Weighing instruments are not perfect measuring instruments. Their performance (how well they weigh) can depend on a number of different factors from; where the balance is located, the material that is being weighed and operator technique. This section seeks to identify these factors and how their effect can be minimised

Subject Headings

- The balance environment
- The application
- Weighing technique



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A "UKAS Accredited Calibration Laboratory" for :

- Weighing
- Pipettes
- Weight Calibration



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3) Weights and their uses

The use of external weights should form an integral part of your weighing procedure. Doing so will quickly identify any weighing instrument that is not weighing reliably.

Subject Headings

- Why use weights
- Types of weights
- Applications for the use of weights
- Care and Use of weights
- User check – performance qualification

4) An introduction uncertainty in weighing

Uncertainty in weighing is a big subject. This section does not seek to explain the subject in full, but to introduce the key subject areas to those whom have little or no understanding in this area

Subject Headings

- What is weighing error?
- Why calculate it?
- What is an acceptable level of error?
- Uncertainty of Measurement
- What is the smallest amount I can weigh on my balance

5) Understanding your calibration certificate

Do you really understand your certificate of calibration? This section seeks to explain the key performance checks carried out on your balance and the different types of certification available.

Subject Headings

- What is a Calibration Certificate
- The purpose of the calibration certificate
- The key performance tests
- Levels of certification and their differences

7) Quality in Weighing & Legislation Overview

Organisations are becoming increasingly subject to regulation and scrutiny. Whether it be their customers, regulatory bodies such as the FDA, MHRA or accreditation bodies such as UKAS. The requirements and focus may slightly differ but the principles remain the same – weighing best practice.

This section will also review the requirements of the FDA's USP 41 and the NAWI directive.

Subject Headings

- Quality System Requirements for weighing
- USP 41 – Minimum Weight
- NAWI Directive



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