

TRAINING SERVICES - BASIC WEIGHING

Much attention in laboratories today, is focused on the instruments in use and ensuring they are fit for purpose, maintained and calibrated to National or International standards. There is a good reason for this, as it helps to ensure the reliability of your data.

However, little emphasis is placed on the operator and the way in which they use an instrument. A poor understanding coupled with improper weighing technique can result in the same consequences as using uncalibrated equipment, i.e inaccurate non-repeatable results.



SUITABILITY AND COURSE STRUCTURE

This course has been designed for those who need to develop an understanding of the key concepts in weighing. The course covers the practical elements of weighing such as, what factors can influence your weighing results, safety & cleaning and using weights to perform checks on your balance.

This course also looks at the wider issues relating to weighing including, understanding the your calibration certificate, uncertainty of measurement, as well as quality systems and weighing.

The course can also be tailored to meet your specific learning objectives. The following pages outline how the course is structured.

COURSE BREAKDOWN

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

Interfacing your balance

Internal Calibration / External Calibration

Printing hard copies of your results

Environmental filters

IP Rating

Care & Cleaning

Balance Identification

COURSE BREAKDOWN

2) Weighing Performance

Balances are not perfect measuring instruments. Their performance (how well they weigh) can depend on a number of different factors such as, 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

COURSE BREAKDOWN

3) Weights and their uses

The use of external weights should form an integral part of your weighing procedure. Doing so allows users to quickly identify if the balance is weighing accurately, or if a problem is present.

Subject Headings

Why use weights and what weights to use

Types of weights : OIML Classes,

Applications for the use of weights

Care and Use of weights

Calibration Drift

User check – performance qualification / calibration procedure
including checks ,frequency and recording

COURSE BREAKDOWN

4) An introduction uncertainty in Weighing

Uncertainty in weighing is an area that is often misunderstood. This section does not seek to explain the subject in full, but instead introduces the key subject areas to those whom wish to develop their understanding within 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

COURSE BREAKDOWN

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

COURSE BREAKDOWN

6) Quality in Weighing & Legislation Overview

Organisations are becoming increasingly subject to a number of regulations. Whether it be the 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 Chapters 41 and 1251 and European Pharmacopoeia Ph. Eur. 2.1.7 and the NAWI directive.

Subject Headings

Quality System Requirements for weighing.

FDA, USP and European Pharmacopoeia requirements, minimum weight etc.

Legal Metrology : CE Approved, NAWI Directive.

BESPOKE TRAINING

Bespoke training can be arranged for customers who only have an interest in some of the subject areas covered within this document.

