



**sartorius**  
mechatronics

**EXPAND®** Your Mind  
Seminars and Training  
Courses/Workshops



turning science **into solutions**

## Sartorius Mechatronics Lab Seminars:

Sartorius seminars are now being offered in your facility at nominal cost. Given by experts in the field with hands-on training these seminars will enhance your knowledge and bring you a new understanding of weighing techniques and applications.

### **Seminar 1:** Fundamentals of Weighing Part 1 - Basic Principles of Weighing Technology

This seminar discusses the basic principles of mass, weight and gravity. Air buoyancy effects are also discussed. In addition, the different balance types and classifications are described, such as strain gage systems and electromagnetic force compensation.

Time: 1 Hour

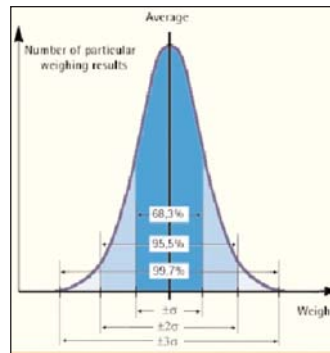


### **Seminar 2:** Fundamentals of Weighing Part 2 - Factors That Effect The Accuracy of Weighing

In this seminar, external factors that can cause errors in weighing are discussed. The effects on weighing accuracy of gravitational effects, balance leveling, electrostatic charges and magnetic samples are described. Other ambient effects such as temperature changes and vibration and how to set up and operate balances to minimize these effects are also discussed.

Time: 1.5 - 2 Hours

### **Seminar 3:** Balances and Scales Used as Measuring and Test Equipment in a Quality System



*The standard deviation  $s$  is used to evaluate a balance with regard to its reproducibility. For a confidence interval of  $\pm 3s$ , 99.7% of the values measured lie within these limits around the mean. (Pertch, T.- GIT Lab Journal Volume 7, 2003 pp 90-92)*

In today's pharmaceutical laboratories, regulatory compliance must be maintained to ensure quality of product and proper traceability. In this seminar, we describe the regulations that pertain to balances and scales and how to properly integrate balances into a quality system. Regulations such as USP 41, GMP/GLP, 21CFR Part 11 and validation protocols IQ/OQ/PQ are described.

Time: 1.5 - 2 hours

### **Seminar 4:** Thermogravimetric Moisture Analysis of Materials

Moisture analysis of materials using the thermogravimetric method can be tricky. Not only does the technology differ from the traditional oven drying method, but there are differences in heating technologies and sample preparation. These factors will be discussed to show how differences in technology and sample preparation can affect the final results. Hands on demonstrations to show proper sample preparation and handling techniques will be stressed.

Time: 3 hours

