Success Story

Weighing Cytostatics in Safety Weighing Cabinets

The customer, a contract manufacturer of medications for individual patients, was looking for a balance that he could also use under laminar-flow conditions, which prevail in safety workbenches, safety weighing cabinets and under laboratory fume hoods, for fast, accurate and efficient weighing of cytostatics.

Customer Requirements

In order to precisely and reproducibly weigh cytostatics that are used in chemotherapy to combat cancer, precision balances with a readability of 10 mg or even down to 1 mg are required. These drugs are weighed under sterile conditions in safety workbenches, which are equipped with a system for drawing off exhaust air under vacuum to protect personnel and products alike. The air currents generated by this system, interlaminar displacement currents, considerably hinder the weighing process, however. These currents not only prolong weighing-in (>5 sec.) but also result in significant weighing errors (+/- 50 mg).

Balances equipped with draft shields minimize the risk of measurement errors, though they slow the weighing-in procedure even more as draft shields complicate handling of samples on the balance. For instance, maneuvering a sample into the correct position on the relatively small weighing pan can pose a real challenge within the confined space of a draft shield. This problem can be eliminated only by using a precision balance that does not need a draft shield, yet delivers fast and accurate weight measurements in laminar-flow environments.

Solution

Sartorius Cubis® precision balances excel in meeting these requirements. Equipped with a special weighing pan, called Q-Grid, that features a grid mesh, the balances have a much smaller area exposed to interference by air currents. As a result, they optimally fulfill the customer’s needs.

Cubis® balances now enable staff to weigh samples quickly (<2 sec.) and highly accurately (+/- 10 mg), even inside a safety workbench. With these performance specifications, Cubis® precision balances are ideal for use under a standard laboratory fume hood. The original standard weighing pan on Cubis® can be easily exchanged for Q-Grid, which is available for all precision balances of this series.

Such balances are highly advantageous for the pharmaceutical industry, for example, in the production of medications under sterile conditions.

Cubis®, the completely modular-design series of laboratory balances:
- Q-Guide – wizard-supported user|task management for total ease of operation in complex weighing tasks
- Q-Level – the fast, easy and reliable way of leveling
- Q-Pan – automatically minimizes off-center loading errors
- Q-Com – unlimited communication (interface options, communication with external software or over the Web, ...)
- Advanced Pharma Compliance – ideal for use in the pharmaceutical industry

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