

Humidity Measurement in the Pharmaceutical Industry

Orion Corporation, the Finnish pharmaceutical firm, uses Vaisala humidity and temperature transmitters as part of a validated system that follows Good Manufacturing Practice guidelines.

GMP demands precise measurement

Pharmaceutical firms have to follow Good Manufacturing Practice (GMP) – far stricter than ISO9000 guidelines on safety and quality in manufacturing pharmaceutical products. Orion's premises in Turku, Finland have used Vaisala measurement products for more than ten years to measure relative humidity and temperature both indoors and out. A separate, validated system measures conditions in laboratories, production, packaging and storage rooms.

Strong in drug discovery

Orion is the leading pharmaceutical company in Finland, with marketing and sales operations in most European markets. The company is strongly devoted to exploring new medicinal treatments. Drug discovery focuses on three key areas: central nervous system disorders, urological and critical care therapies for both human and animal health. R&D and production are carried out in Finland, with a clinical research centre in the UK.



Challenge

- Good Manufacturing Practice (GMP) requires a validated system for humidity measurement
- Instruments must be easily calibrated, as they cannot be dismantled for calibration
- Humidity sensors in wash-down areas must recover quickly

Solution

- Vaisala instruments provide superior accuracy and easy calibration
- Vaisala offers tools for on-site calibration
- Vaisala HUMICAP® Humidity and Temperature Transmitter recovers quickly from washing

Benefits

- Accurate humidity readings shortly after wash-downs
- Reliable accuracy in sensitive industrial measurement
- Easy calibration that does not require disassembly



"With Vaisala instruments, we can always be sure the readings are true – if the signal is zero, it really means zero! This is a simple thing as such, but it was not so obvious with the other instruments we tested."

Jyrki Salminen, Maintenance department, Orion, Turku, Finland

Ease of calibration important for validated system

Part of the reason that Orion's operations managers chose Vaisala was because of ease of calibration. "Each measurement instrument is calibrated both in the sensor and as part of the measurement system," says Pasi Kollanus, Safety Manager at Orion's Turku site. "Because of the validated system, the measurement instruments cannot be dismantled for calibration. Vaisala could offer us the right solution for on-site calibration and adjustment. We are extremely happy with it," he concludes. The objective of a validated system is to provide proven environmental information at all stages of production.

Superior accuracy

Vaisala was the clear winner when a supplier for new installations was chosen, due to the superior performance of their instruments. "With Vaisala instruments we can always be sure the readings are true – if the signal is zero, it really means zero! This is a simple thing as such, but it was not so obvious with the other instruments we tested," points out Jyrki Salminen of Orion's maintenance department.

Vaisala humidity transmitter for wash-down areas

Vaisala also provided a solution for humidity measurements in spaces that are often washed. "Our production facilities are high pressure cleaned with water once or even twice a day. Traditional humidity transmitters show overscale in the sensor for hours after washing due to humidity in the sensor. Vaisala HUMICAP® Humidity Temperature Transmitter with warmed probe recovers much faster from such humidity and we have therefore used them to equip our wash-down areas," says Mr. Salminen.



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For more information, visit
www.vaisala.com or contact
us at sales@vaisala.com

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