

VAISALA / SUCCESS STORY

Global Nutrition Company Adopts Continuous Mapping Strategy to Strengthen Environmental Monitoring

Founded in 1980, Herbalife Ltd. is a global nutritional company that provides dietary supplements, vitamins, and personal care products in over 90 countries through a network of more than 3 million independent members. To ensure products are protected during manufacturing, packaging and storage, Herbalife maintains strict controls over environmental parameters with a risk-based approach. In its global distribution centers, quality testing labs, and manufacturing facilities, the company adheres to Current Good Manufacturing Practices (cGMP) and strives to meet or exceed all requirements that ensure the purity, safety and efficacy of Herbalife products from manufacture to final distribution.

To meet the highest standards, Herbalife Quality managers decided to perform several year-long thermal mapping studies to qualify storage environments according to regulatory guidance. The results of these studies would then be used to design the long-term monitoring systems for the warehouses. However, upon further examination, Herbalife's Quality team decided that if they were going to set up the mapping sensors, taking down half the measurement points after the studies were complete might be unnecessary. Instead, by leaving a higher number of sensors in place, as typically required in a mapping/validation study, facility managers would have access to more in depth data for detailed analysis and better decision making.

Gary Swanson, Senior Vice President of Quality for Herbalife International says, "We wondered if we wouldn't be better off maintaining the higher density of sensors for long-term monitoring and decided to leave all sensors in place. This essentially resulted in 'continuous mapping' of these environments. We have used this system for three years and found it very successful."



HERBALIFE™



“Some key features that contributed to our final selection included the 10-year battery life of the data loggers, plus their ability to be validated. We also appreciated Vaisala’s global service capabilities, especially their ability to provide site evaluation, installation, and validation execution services in many locations. It was important to us that the system could be deployed internationally and Vaisala was the only company we found that could support us throughout our other regions, ensuring proper training, support and system uptime.”

Gary Swanson,
Senior Vice President of Quality
for Herbalife International

The continuous mapping setup provided information representative of year-round conditions while eliminating the time and cost of resources typically required for intermittent mapping studies.

Herbalife’s storage and manufacturing areas range from 1,000 to 750,000 square feet and vary greatly in environmental attributes such as air conditioning, control systems, and climatic zones. Swanson notes that warehouses can have subtle fluctuations in temperature. Such problems often only become visible after analysis of data collected over a long time. Giving an example, Swanson says, “In Taiwan our continuous mapping method showed after six months that, although the warehouse had functional air conditioning, there were definitely a few excursions occurring. This information allowed us to intelligently reconfigure the warehouse HVAC system to create more even temperatures throughout.” Another advantage of high sensor density is that if one sensor does fail or lose communication, personnel still have full visibility of warehouse conditions. This increases the sense of control and confidence in an alarm situation.

In early 2014, one of Herbalife’s warehouses underwent a regulatory inspection. Over the days of the inspection, the Herbalife Quality team outlined the continuous mapping method. “We were in the middle of the inspection,” says Swanson, “and the inspector requested some formal planning documents to provide detailed data on our rationale for continuous mapping. This required analysis that we couldn’t execute during the inspection. But, Vaisala provided us with documents we were able to give to the inspector while he was still on site. In the end, the inspector reviewed and accepted the monitoring system’s setup.”

While evaluating monitoring system vendors, Herbalife tested multiple systems. Key requirements included: a system scalable to any size of warehouse, in any type of climate, and consistency in implementation and management. Over six months, Swanson and the Herbalife Quality and Facilities Management team evaluated several systems before selecting the Vaisala Continuous Monitoring System.



Challenge

- **Environmental** - Herbalife has warehouses in worldwide climatic zones 1, 2, 3, 4a and 4b: from hot tropical, hot dry, to cold. They require a system that can be stretched to the extremes of environmental conditions.
- **Historical Reporting** - To ensure compliance, Herbalife must have reporting capabilities that prove adherence to regulatory requirements. These reports must satisfy the global regulatory inspectors that visit Herbalife facilities throughout the year.
- **Guaranteed Product Quality** - The company needs to manage the overall product quality throughout the supply chain and adhere to current Good Manufacturing Practices (cGMP). Combined with Herbalife's own standards of Quality, this compliance guarantees that all Herbalife members and their customers receive the highest quality and safest products available.

Solution

- **High Performance Hardware** - The Vaisala Continuous Monitoring System (CMS) can use a wide array of high-performance sensors to monitor temperature, relative humidity, differential pressure, door switches, and more. With 10-year battery life and months of data redundancy in each sensor's memory, records are secure and gap-free.
- **Meet Quality Standards** - The Vaisala CMS ensures that Herbalife can meet or exceed rigorous regulatory standards. The system provides industry-best sensing accuracy and calibration is locally available from Vaisala's Regional Service Centers.
- **Multilingual** - The Vaisala CMS software viewLinc is available in English, German, French, Swedish, Chinese, Japanese, Spanish and Portuguese, with User Guides and Quick Starts.
- **FDA 21 CFR Part 11 Compliance** - The system includes triple data redundancy, Audit Trail, customizable graphing, and automated reporting options.

Benefits

- **Enterprise Solution** - Herbalife's goal of an enterprise-wide monitoring solution for global processing and storage facilities was met across almost 100 global distribution centers, quality testing labs, and manufacturing facilities.
- **System Support** - Vaisala provides 24/7 technical support. We offer Web-based self-service training tools along with expert guidance on the use and configuration of the CMS. An annual system analysis is available to review system performance and ensure that business objectives are being met.
- **Eliminate Product Loss** - The Vaisala CMS ensures that facilities personnel maintain full control of monitored areas, identify any problems quickly, and respond with corrective actions. The option of continuous mapping sensor configuration provides better data for long-term analysis.
- **Peace of Mind** - Vaisala's experienced validation and calibration experts are available online and by phone 365 days per year, as well as during inspections/audits to provide analysis, technical and calibration information, and formal reports to satisfy regulatory requirements.
- **Global Reach** - Vaisala has offices throughout the world. Visit www.vaisala.com/en/contact/offices/Pages/default.aspx



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