



CUSTOMER CASE STUDY:

Ensuring Efficiencies, Compliance and Productivity Gains in Food Analysis at Sino Analytica Company

“We would like to recommend Thermo Fisher Scientific for the quality of both product and service”, stated Ms. Caroline Zhang, Sino Analytica LIMS Engineer.

Profile

Based in Qingdao, China, Sino Analytica is a world-class food analysis laboratory which serves a wide range of food suppliers, trading companies and retailers from China and all over the world. In addition to providing food analysis, the company also engages in analysis to support the whole food chain.

Established in 2003, Sino Analytica is accredited by the International Standard ISO 17025-2005 and has achieved three national and international accreditations:

- CNAS (China National Accreditation Conformity Assessment) No.1512, 1999
- UKAS (United Kingdom Accreditation Services) accredited testing laboratory No. 2599, 2005



- CMA (China Metrology Accreditation) No. (2004) Quality (LU) No. V0077

A wide range of testing services is included in Sino Analytica’s business that is supported by a prominent European public sector laboratory in agriculture (Central Science Laboratory – CSL), and the largest independent UK-based membership organization in Europe (Campden & Chorleywood Food Research Association – CCFRA). For example, the company is engaged in the analysis of pesticide residues, drug residues, heavy metals, microbiological contaminants, colours, physical testing and formaldehyde release from wood composite products. Most of the testing items are already accredited by UKAS or CNAS.

Business Challenge

Sino Analytica provides contract analytical services to a wide range of food suppliers, trading companies and retailers from China and all over the world. The laboratory also employs food analysis to support the advisory and consulting activities to food growers and processors.

Sino Analytica has historically managed data manually in the laboratory, with a monthly load of over 1200 samples in this location. Given the scope of the work done in this laboratory, the company needs to have a laboratory information management system (LIMS) to effectively control and manage data and information to meet their internal quality standards and accreditation requirements. The company also needs a LIMS to help improve their data handling and

processing to reduce the likelihood of errors due to transcription mistakes and provide faster dissemination of data. With a more efficient laboratory operation, data sharing will allow for multiple inputs and the resulting actions to be more quickly realized.

Requirements

The implementation of a LIMS in the laboratory presented a number of specific requirements, including managing sample processing, testing results, quality control, and sample tracking. Additional requirements of the LIMS were outlined: capturing instrument result files, managing sample authorization processes and monitoring internal quality assurance.

In addition, there are six types of instruments (HPLC/MS/MS, UPLC/MS/MS, GC/MS, GC/MS/MS, ICP/MS and IC) and a total of 12 instruments are used in the laboratory. The instruments have to be well-integrated with the LIMS.

Solution and Business Benefits

After a strong recommendation by Central Science Laboratory (CSL), Sino Analytica decided to call on Thermo Fisher Scientific for a LIMS solution. The project at the Sino Analytica laboratory involved the implementation of Thermo Scientific Nautilus™ LIMS to support the Food Safety Contract Laboratory.

Typical LIMS requirements in this laboratory involve the analysis of many different kinds of food-related samples, including vegetables, fruit and fruit juice, fish, nuts, water, wine, soft drinks, fungi, meats, flavoring, herbs and spices, cereals, additives, feedstuff, pigments, sweeteners and soil. A total of sixty-five users would work with Thermo Scientific Nautilus LIMS after the implementation.

Nautilus LIMS was installed and began operations in the Qingdao laboratory on schedule in July, 2003. This fully validated solution met all the initial requirements of Sino Analytica.

The implementation of this solution has resulted in a number of clear benefits for Sino Analytica. Nautilus LIMS helps laboratory managers control information and data relating to testing activities. Nautilus users also see immediate benefits in faster assembly, collation and review of data used in QA/AC activities. Nautilus LIMS helps to increase the dissemination and sharing of data so that multiple user inputs and resulting actions can be more quickly realized. Nautilus LIMS also helps support accreditation activities, as well as managing data related to customers and their specific testing requirements. At Sino Analytica, audit trails and traceability are an essential part of accreditation requirements. Nautilus LIMS facilitates these activities, demonstrates that Sino Analytica meets the requirements of auditors in those areas, and provides documentation for processing of internal QC data.

Future Plans

In continuation of the successful implementation of Nautilus LIMS in the Qingdao laboratory, Sino Analytica plans to continue to work closely with Thermo Fisher Scientific by implementing Nautilus LIMS in their new laboratory in South China. Sino Analytica also plans to link their financial software with the LIMS and add a remote or web access facility into the system.

Partnering with Thermo Fisher Scientific

Thermo Fisher Scientific is the worldwide leader in laboratory software and related services, providing enterprise-wide, multi-laboratory solutions. To support its Thermo Scientific branded LIMS installations, the company provides implementation, validation, training, maintenance and support from the industry's largest worldwide informatics services network.

In Good Company

Here's a sampling of food and beverage customers who count on Thermo Scientific LIMS: Department of Agriculture, Ireland; Ingredia, France; Coca-Cola, USA; Kellogg Company, USA; Muller Dairies, England; Quaker, USA; and South African Sugar.

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