



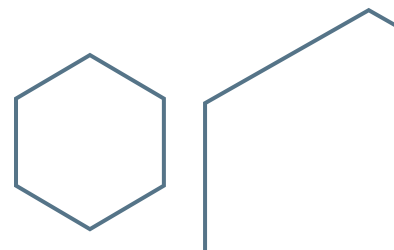
CUSTOMER: EUROFINS AGROSCIENCE SERVICES, GERMANY

Eurofins Scientific is one of the international leading business groups in the field of contract analysis. The global leader for analysis and laboratory services for the pharma, food, environmental and consumer goods industry has more than 650 contract laboratories with more than 45,000 employees in more than 45 countries.

The division Eurofins Agroscience Services offers complete laboratory services for manufacturers of agrochemical products. These services consist of full technical support regarding screening, development, approval and support of both new and existing products.



*“Thanks to the optical pressure monitoring of the **speedwave XPERT**, we are able to generate reproducible microwave digestions and therefore a maximum of reliability.”*
- Ulrike Morsch (lab technician at Eurofins Agroscience)





CHALLENGE

In the field of environmental analysis, the sample types for heavy-metal analysis consist of a large variety. Therefore, during the microwave digestion process, different pressures can occur within the single digestion vessels. On a case-by-case basis, this can lead to spontaneously induced exothermic reactions. In addition to discontinuation of the digestion process and to damages on the microwave instrument, these reactions also endanger the safety of the people working in the lab. In order to reduce these safety risks, Eurofins Agrosience counts on the optical pressure monitoring technology of the **speedwave XPERT**.

APPLICATION

Eurofins uses the **speedwave XPERT** especially for heavy-metal analysis of samples from the environment sector, like soil, potatoes, different types of fruit, earthworms, etc. For these digestion processes, different mixtures of HNO_3 , HCl and H_2O_2 are mainly used. The corresponding application notes are developed in-house by Eurofins. The temperatures for the digestions vary between 180 °C and 200 °C, the maximum pressure is 20 bar.

EQUIPMENT

3 x **speedwave XPERT** with DAP-100 vessels with OPC

RESULTS/BENEFITS

Due to OPC, the optical pressure monitoring technology of the **speedwave XPERT**, Eurofins is able to monitor the arising pressure within all vessels during microwave digestion processes. For comparison: other manufacturers of microwave digestion systems usually offer pressure monitoring technologies that allow monitoring in only one reference vessel. Thanks to the optical pressure monitoring system, exothermic reactions are recognized in advance and the **speedwave XPERT** regulates or even stops the digestion process automatically.

Moreover, the **speedwave XPERT** is equipped with high-quality PTFE vessels. The vessels convince by an outstanding lifetime and therefore help to reduce running costs for Eurofins Agrosience. Ulrike Morsch, lab technician at Eurofins Agrosience, explains the purchase decision for the **speedwave XPERT** in the following words: “Of course, we had compared microwave digestion systems of different manufacturers in advance. We have been convinced by the **speedwave XPERT** due to its unique sensor technology that allows an optical pressure monitoring. Now, we have the possibility to monitor the arising pressure within all vessels during the digestion process. In this way, we can maximize the reliability of our analysis and, as a very positive side effect, we can reduce our running costs, as well.”

