

Smart Notes

QA

How flexible is FlashSmart Elemental Analyzer to meet your growing analytical needs?

Laboratories running quality control or R&D analysis of raw, intermediate and final products require accurate and automatic analytical technique allowing fast analysis with an excellent reproducibility. With the Thermo Scientific™ FlashSmart™ Elemental Analyzer (EA), laboratories have an all-in-one solution to perform quantitative elemental analysis from 1 to 5 elements (carbon, nitrogen, hydrogen, sulfur and oxygen) in micro and/or macro mode.

The flexibility of the FlashSmart EA allows you to meet your growing analytical needs whether your analysis is in organic chemistry, cosmetics, food/animal feed, petrochemistry, environmental, agronomy, marine science or material industries for research or quality control. The FlashSmart EA is based on the modified Dumas Method, providing over 20 configurations in one system, offering flexibility to improve your workflows and minimize downtime. Powerful software supports system automation and automated and precise reports, meeting your demand for high throughput and reliable data reporting.



What is the benefit of having two totally independent furnaces in the FlashSmart EA?

Your sample throughput is significantly increased through the possibility to install two analytical circuits that can be used sequentially and are completely automated through the Thermo Scientific™ MultiValve Control (MVC) Module. Each analytical circuit hosts its own autosampler allowing the FlashSmart EA to cope effortlessly with the most diverse analysis requirements.

When using FlashSmart EA configurations in which the combustion reactor is coupled with the reduction reactor, for an example in NC Soils, N/Protein, N Lubricant or N Brew, you gain flexibility to analyze increased sample weight and save costs by extending the lifetime of your consumables.

How does the MultiValve Control Module contribute to automation and ease-of-use for your analysis?

The MVC Module improves your analysis efficiency by allowing automated switching from the left channel to the right channel, or vice versa. This means you can pass from CHNS to Oxygen analysis within a few minutes. Additionally, the MVC Module supports sample introduction modularity through automated control of two autosamplers allowing flexibility to combine solid and liquid autosamplers as your sample type requires.

The MVC Module also ensures very low helium consumption by switching from helium to nitrogen or argon gas, when the instrument is in Stand-By Mode. In this way, the cost of analysis is significantly reduced.

How does software support high flexibility of your FlashSmart EA?

From sample to data analysis, the Thermo Scientific™ EagerSmart™ Data Handling Software manages the entire elemental analysis workflow. The EagerSmart Data Handling Software provides templates for the most favorable analytical conditions for your application. In addition to weight percent determination, the EagerSmart Data Handling Software automatically calculates the Heat Values, CO₂ Emission Trade, Protein determination and Empirical Formula of your samples. The EagerSmart Data Handling Software is fully ready to support over 20 FlashSmart EA configurations such as CHN/O, CHNS/O, CHN/S, CHNS/CHNS, CHN/CHN, NC/S, NC single reactor / S, and N-Protein single reactor / S.

The all-in-one FlashSmart Elemental Analyzer grows with your analytical requirements providing the optimal solution in terms of accuracy, reproducibility, speed of analysis, automation, and cost per analysis. The FlashSmart EA meets the demand of laboratories performing quantitative analysis using a specific configuration while offering the flexibility for future analytical demands.



Find out more at thermofisher.com/OEA