HT-EA Wave High Temperature Elemental Analyser Preparation Module

The Sercon HT-EA Wave is a high temperature EA furnace – the most robust thermal decomposition device on the market.

The HT-EA Wave provides high precision ^{18}O and ^{2}H measurements for both solid and liquid samples. Designed with a no compromise approach to both performance and robustness, the HT-EA Wave uses the most advanced technology to deliver high precision measurements
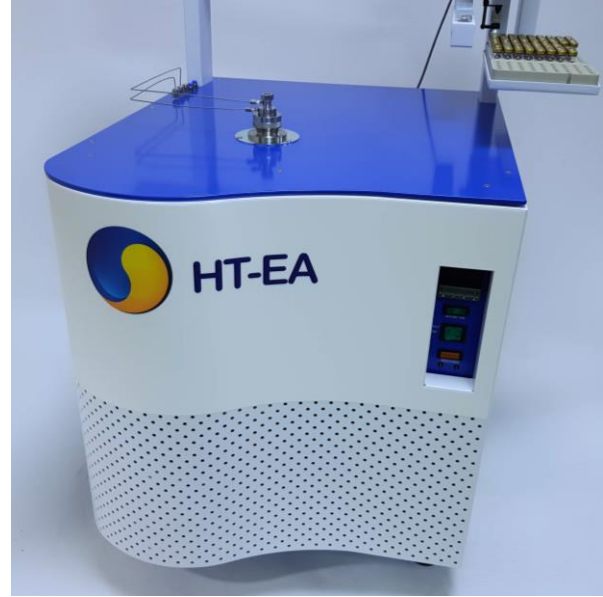
Key features:

- Temperature programmable furnace up to 1450˚C for pyrolysis, combustion or reduction applications

- Benchtop module which can be used as a peripheral to the Sercon ^{iso}EArth or as a standalone device

- Solid sample analysis via the Sercon zero blank performance autosampler

- Liquid sample analysis via a PAL autosampler into a Sercon designed septum sealed port. The PAL is widely recognised as the most reliable and highest performance liquid sampler available.

- GC column for sample purification

- High quality stainless steel diaphragm regulators for gas control, digital flow and pressure sensors, normally closed valves configured to save gas and preserve consumables in the event of a power failure

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Sample analysis

^{18}O and ^2H on solid or liquid samples

The sample falls into the pyrolysis tube from the autosampler, the pyrolysis products CO, N_2, and H_2 are purified by chemical processes. A $MgClO_4$ trap removes water vapour, an absorbent trap removes any CO_2 and a GC column separates CO from N_2.

Specifications

Isotope	Gas	Pyrolysis (solids)	Pyrolysis (liquids)
D	H_2	1.5 ‰	0.6 ‰
^{18}O	CO	0.3 ‰	0.3 ‰

Software

Total software control of the instrument system and data processing with Sercon Calisto software – fully compatible with all versions of Windows

Allows storage of sample analysis protocols to comply with good laboratory practice

Software controlled oxygen injection to match sample requirements thereby preserving the life of the consumables

Inter-file import/export facility from instrument PC to laboratory server or internet (allows rapid updating of software or transfer to common spreadsheet packages)

Standby mode to preserve consumable life during periods of low use

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