

The world's fastest cryogenic cold trap

Programmable GC Cryogenic Cold Trap

Cryogenic cold trapping is frequently used for narrowing the chromatographic band and improving the detection limit. When trapped, analytes must be released from the trap using a highly accurate and very fast heating ensuring that they are introduced onto the column in a very sharp band. This results in better detection limit and better resolution.

Increase in Sensitivity

With CryoFocus-4 analytes are focused at the head or end of the column by cooling its selected section to sub-ambient temperature. After re-focusing, the analytes are released from the trap in a very narrow band using an extreme fast heating rate of 60 °C/second. As a result, very sharp peaks with a high signal to noise ratio are obtained.



Fast Heating and Cooling

Unique, low thermal mass design of the CryoFocus-4 trap allows extremely fast heating (up to 60 °C/sec) and cooling. Cooling can be done in two different ways;

- Using LN₂ from pressurized vessel (direct cooling). Trap can be cooled down to -150 °C.
- Using liquid CO₂. Trap can be cooled down to -50 °C.

Universal Trap

The Cryofocus-4 is designed to be installed on any type of GC. The universal installation kit is available. Thanks to its clear and structured control software, operation of the system is also very simple.

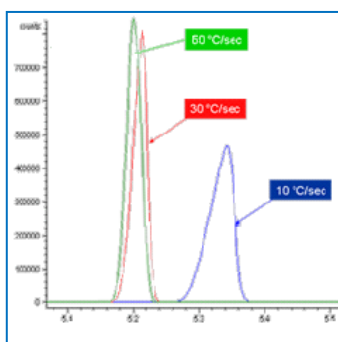
Evolution Workstation Control Software

- Real-time system status and parameter display
- Method definition and development
- System run log file
- Password protection with two access levels

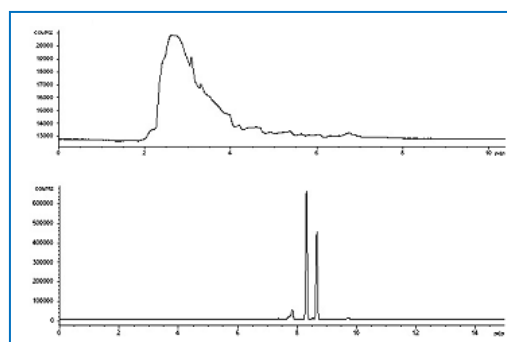
CryoFocus-4 Versions

- Integrated with OPTIC-4 Multimode GC Inlet system
- Stand-alone unit compatible with any GC

Fast Heating Ramp Rate and Trapping Capacity



Heating Ramp Rate Matters



Chromatogram for THC in human hair without and with CryoFocus

Technical Specifications

Cooling Media:	LN ₂ (-150 °C), CO ₂ (-50 °C)
Consumption LN ₂ :	approx. 1 liter per sample, depending on GC method
Cool down time:	2-3 minutes (from 350 °C down to -150 °C at GC oven at 50 °C)
Temperature range:	-150 °C to 350 °C
Heating ramp rate:	1 to 60 °C/sec
Heating system:	3 V DC, 15 W max
Operating modes:	manual or automatic
Dimensions Control Unit:	L 34 x W 14 x D 34 cm, 6.7 kg
Dimensions Trap:	ø 34 mm, 115 mm long, 0.8 mm ID
Power :	80 VA

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