Spe-ed™ Basic

Applied Separations

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Laboratory System

Spe-ed SFE-Basic

Get Started with Supercritical Fluids Technology

The *Spe-ed*™ SFE Basic is the base SFE in our series of instruments for supercritical fluid processes. The straightforward design of the *Spe-ed* SFE Basic includes the essential components required for supercritical fluid processes. This instrument is robust enough for rigorous use in the research lab, with a price tag that allows everyone to take advantage of the benefits of Supercritical fluids. It is safe, simple to operate, fast and affordable, with features found in other, more expensive SFE systems.

Supercritical Fluids excel in emerging industries like foods, natural products and nanotechnology where solvents can't be used.

The system features:

- temperatures to 150°C
- pressure up to 10,000 psi (690 BAR)
- pump flow rates up to 200mL/min*
- control of flow rates to pressure vessel
- fully-adjustable, non-clogging micro-metering valve
- process vessels ranging in size from 5 to 100mL
- extract collected into SPE cartridges or standard glassware
- in-line trapping capabilities
- modifier addition capability
- liquid sample extraction capability
- multiple over-pressure safety devices

Highlights of the *Spe-ed* SFE-Basic

Heating Compartment

- Flip-up cover for easy access
- Temperatures to 150°C

Micro-metering valve

- Straightforward adjustable design
- Non-clogging
- Simplified cleaning / rinsing
- Maintenance free
- Flow control +/- 1.8%
- Heated to compensate for Joule Thompson cooling

Vessels

- 5 mL to 100 mL hand tightened
- Simplified shutoff valves
- Static and dynamic extractions

High Pressure CO_2 Pump

- Reliable air driven
- Pressure 690 BAR (10,000 psi)
- 200 mL/min flow rate*
- Digital pressure setting maintains a desired set point throughout the system
- Integrated cooling requiring no external chiller

Temperature

- PID controllers maintain the precise temperature of the high pressure vessel and micro-metering valve.
- Independent sensors monitor the temperature of the vessel and micro-metering valve.

Safety

- Built-in automatic over pressure and over temperature safeguards
- Audible alarm
- Pressure relief valve
- Rupture disc

*flow rate based on incompressible liquid

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