

Spe-ed™ Prime



**Applied
Separations**

www.appliedseparations.com

Spe-ed SFE-Prime

The *Spe-ed*TM SFE Prime is the newest SFE in our series of instruments for supercritical fluid processes. These systems meet the rigorous needs of day-to-day use in the classroom and are made for hands-on demonstrations. It is safe, simple to operate, fast and affordable, with features found in other, more expensive SFE systems.

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 rate to 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

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 CO₂ 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.

*flow rate based on incompressible liquid



Safety

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