

Discover SP-D Clinical Tip Sheet

This document contains tips on setup and use of Discover SP-D Clinical.

This unit is for Clinical “Organic” samples only - Examples: hair, skin, blood, fingernails etc.

Unit Setup

The default settings will not be sufficient for Method Development. Use table below to program methods.

Setting	Default	Change To	Notes
Heating Program	Ramp to Temperature	Ramp to Temperature	
Vent Program	Organic	Organic	Vent points can be edited if necessary. Contact CEM before editing
Temperature	100 °C	160 °C	
Ramp	2 min	4 min	
Hold	1:30 min	2 min	
Pressure	220 PSI	300 PSI	
Power	200 W	200 W	300 W will cause temperature overshoot
Stirring	High	Medium	
Delta	50	200	If excessive venting is observed increase Delta to 210, 220, 230, 240, etc. until venting subsides

After 160 °C, increase ramp time by 1 minute for every 10 degrees.

Temperature (°C)	Ramp (min)	Hold (min)
160	4	2
170	5	2
180	6	2
190	7	2
200	8	2

Sample Size

Vessel Size	Maximum Sample (weight)	Maximum Sample (volume)
4 mL	≤ 0.05 g (50 mg)	≤ 0.5 mL
10 mL	≤ 0.1 g (100 mg)	≤ 1.0 mL

Acid Volume

Vessel Size	Minimum Acid Volume	Maximum Acid Volume
4 mL	0.2 mL	2.0 mL
10 mL	0.2 mL	5.0 mL

Note: 6N HCl, HNO₃, and H₂O only. (DO NOT USE: HF, H₂SO₄, H₃PO₄, H₃BO₃, or Aqua Regia)

For Coffee test/IQOQPQ use 0.025 g (25 mg) of sample.