Specifications

OMNISEC RESOLVE

Pump flow rate:
0.005 - 10 mL/min

Flow rate accuracy:
±1%

Pressure range:
0 - 5000 PSI (34.5 MPa)

Pulsation:
0.15% @ 1 mL/min in water

Dimensions (W, D, H):
420, 640, 890 mm

Weight:
62 kg

Software:
OMNISEC software v10 (or later)

Data acquisition rate:
100 Hz

Patents:
US 14/599,033 "Continuous back seal wash"

AUTOSAMPLER

Capacity:
Up to 192

Sample container types:
HPLC vials or 96-well microtiter plates

Injection volume:
1 - 300 µL

Injection volume accuracy:
>99.5%

Injection volume precision:
<0.3% RSD in full loop mode

<0.5% RSD in partial loop mode

<1% RSD in µL pickup mode

Injection overhead volume:
0 µL in µL pickup mode

Syringe volume:

250 µL standard

Temperature control range:

4 - 60 °C

COLUMN OVEN

Column capacity:

6 x analytical (1 x Tricorn 10/300 GL)

Temperature control range:

20 - 65 °C

OMNISEC REVEAL

Dimensions (W, D, H):

420, 640, 600 mm

Weight:

40 kg

Detector temperature range:

20 - 65 °C

Software:

OMNISEC software v10 (or later)

Data acquisition rate:

100 Hz

Patents:

US20140060162A1 & EP2619543Ba "Modular capillary bridge viscometer"

US20140144214A1 & EP2619544A1 "Automatically balanced capillary bridge viscometer"

Detector 1

Detector:

Light scattering

Measurement principle:

RALS 90° angle, LALS 7° angle

Light source:

50 mW, 640 nm laser

Cell volume:

18 µL

Dynamic range:

2500 mV

Baseline noise:

<0.1 mV

Baseline drift:

<0.2 mV/hr

Detector 2

Detector:

Differential refractive index

Measurement principle:

Deflection

Cell volume:

12 µL

Dynamic range:

±2.5 x 10^{-3} RIU

Baseline noise:

<10^{-7} RIU

Baseline drift:

<3 x 10^{-6} RIU/hr

Detector 3

Detector:

Viscometer

Measurement principle:

4-capillary Wheatstone bridge with self-balancing mechanism and user-exchangeable capillaries

Transducers:

Firmware-based transducer overpressure protection

Detector volume:

17 µL/capillary

Differential pressure baseline noise:

0.3 Pa

Inlet pressure dynamic range:

100 kPa

Inlet pressure baseline noise:

0.01 kPa

Baseline drift:

<0.2 kPa/hr

Detector 4

Detector:

Diode-array-based UV/Vis spectrometer

Wavelength:

190 - 900 nm

Number of wavelengths:

1024

Wavelength accuracy:

<1 nm

Wavelength resolution:

0.6 nm

Cell volume:

7.5 µL

Path length:

10 mm

Baseline noise:
2 x 10^{-6} AU
Baseline drift:
5 x 10^{-6} AU/hr

Measurement type 1

Measurement type:
Absolute molecular weight
Measurement range:
200 - >10^{6} g/mol
Minimum quantifiable mass:
100 ng of 100kDa molecular weight polystyrene in THF
Measurement principle:
Light scattering (LALS or RALS)

Measurement type 2

Measurement type:
Intrinsic viscosity
Minimum quantifiable mass:
1 µg of 100kDa molecular weight polystyrene in THF
Measurement principle:
4-capillary Wheatstone bridge

Measurement type 3

Measurement type:
Concentration
Minimum quantifiable mass:
100 ng of 100kDa molecular weight polystyrene in THF
Measurement principle:
Differential refractive index detection

Operating environment

Temperature:
15 - 30 °C

Software

Minimum computer specification:
Windows 7 Professional 64 bit, 4th Gen Intel(R) Core I7 Processor (Quad Core HT, 3.4 GHz Turbo, w/ HD Graphics), 8 GB 1600 MHz DDR3 memory, 500 GB 3.5 inch SATA (7200 RPM) HDD, Full-HD monitor