The QCM MOUDI provides excellent mass measurement accuracy thanks to the integrated humidity conditioning system that ensures reliable coupling of aerosol particles to the quartz crystal sensors, and eliminates undesirable solid particle bounce. With the QCM MOUDI, setup and measurement time has gone from hours to minutes allowing the user to collect size fractionated aerosol masses, in real time (1 Hz data collection), from tens of nanograms up to a few hundred micrograms.

**Applications**
- Sampling for air pollution and air quality research
- Tobacco smoke testing
- Industrial hygiene studies
- Work place aerosol characterization
- Inhalation toxicology testing
- Testing aerosol drug delivery devices
- Conditioned engine exhaust testing

**Features and Benefits**
- 2.5-µm inlet and six QCM stages with sharp collection efficiency curves and calibrated cutpoints of 960, 510, 305, 156, 74 and 45 nm at 10-L/min inlet flow rate
- Real-time mass detection
- Accurate aerodynamic diameter fractionation using micro-orifice impaction stages
- Nanogram resolution with true mass sensing of solid particles
- Samples are still available for post-collection chemical analysis
- Automatic humidity conditioning of sampled aerosol
- Intuitive, advanced touch-screen control and user-friendly features
- Low power consumption vacuum pump included with impactor

The Real-Time, Quartz Crystal Microbalance (QCM) Micro-Orifice Uniform Deposition Impactor (MOUDI) is a precision research-grade impactor with real-time mass detection based on QCM sensors. A breakthrough in cascade impactor technology for size-fractionation and mass measurement of aerosols, MSP's MOUDI™ Impactor is now available with Quartz Crystal Microbalances (QCMs) for real-time mass measurement.
SPECIFICATIONS

REAL-TIME QCM-MOUDI™ IMPACTOR
MODEL 140

**Sampling flow rate**
10 L/min

**Impactor Stages**
6 (QCM) + PM2.5 inlet stage

**Stage Calibrated Cutpoints**
45, 74, 156, 305, 510, 960, 2440 nm

**Dimensions (DWH)**
- QCM MOUDI: 36 x 40 x 57 cm (12 x 16 x 22 in)
- PUMP: 28 x 26 x 27 cm (11 x 10 x 11 in)

**Weight**
- QCM MOUDI: 20.5 kg (45 lb)
- PUMP: 8.2 kg (18 lb)

**Power**
90-126 VAC, 50-60Hz or 210-240VAC, 50-60Hz;
300W (includes pump)

**Operating Conditions**
15–30°C, 0–100% RH (non-condensing)

**Operating Altitude**
< 2000m

**Interface**
Touch-screen color display (200 mm)

**Communications**
Ethernet (RJ45 port)

**Accessories**
- Specify Description
  - 140-HFSS High Flow Sampling System
  - 0140-01-1010 Impactor Stack, QCM MOUDI, 6 stages
  - 0140-98-1308 Replacement QCM Crystal/Plate

**TO ORDER**
Specify Description
- 140 Real-Time QCM-MOUDI Impactor, 6 Stage

Specifications are subject to change without notice.

REFERENCES


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