

Specification Sheet

MALDI-8020

Technical Data

Sample Handling

- Load-lock system for fast sample introduction
- Vacuum XY stage (10 µm repeatability)
- Microscope slide-format sample targets:
 - FlexiMass™-DS disposable targets (48 positions)
 - FlexiMass™-SR48 reusable steel targets (48 positions)
- Raster software for scanning samples for "sweet spots" using circular, square or rectangular rasters, or dither (random motion)

Sample Viewing System

- Colour CCD camera (10 µm resolution) controlled by software embedded in MALDI Solutions™
- Long-life LED illumination

Ionization Source

- Matrix assisted laser desorption ionization
- Pulsed extraction (mass calibrated variable delay) under software control
- Positive ion operation
- TrueClean™ – software-driven UV laser-based source cleaning to reduce the need for maintenance

Laser

- 355 nm solid-state laser, fixed focus
- 1.5 ns pulse width
- Nominal energy – 80 µJ per laser shot
- Laser pulse rate – up to 200 Hz
- Near normal (on-axis) incidence of the laser beam to the sample
- Laser power and laser aim under software control

Analyzer

- Quiet (<55 dB), oil-free vacuum system maintained by one turbomolecular pump with an oil-free backing pump
- Beam blanking to deflect unwanted high intensity signals e.g. matrix ions

Detector

- Electron multiplier (multiple dynode)
- 1.6 GHz, 11-bit transient recorder, 16-bit accumulator

Control and Data System*

- Workstation PC with 23.8" monitor
- Microsoft® Windows® 10 operating system

* Subject to continuous improvement

Software

- MALDI Solutions™ – operates under 64-bit Microsoft® Windows® 10
- Scanning software for the identification of "sweet spots"
- Sample raster editor
- Data export to industry standard (mzML, ASCII)
- Multi-user environment with configurable security
- Centralized secure database for data storage
- Full audit trail, allows for 21 CFR part 11 compliance

Installation Data

Dimensions

- Size (w x d x h) – 450 x 745 x 1055 mm [17.7" x 29.5" x 41.5"]
- Incl. stabilizer – 600 x 745 x 1055 mm [23.6" x 29.5" x 41.5"]
- Weight – 86 kg

Installation Requirements

- Electrical – 100 to 240 VAC, 50/60 Hz, 1000 VA single phase
- A 'clean', stable and continuous mains supply is required for reliable operation
- Temperature range – ambient 18°C to 28°C for performance
– ambient 15°C to 32°C for operation
- Relative humidity – less than 70%, non-condensing
- Vibration-free, firm table to support at least 100 kg

Performance Data

- Mass range m/z 1 - 500,000
- Mass resolution >5000 FWHM – ACTH 18-39 (m/z 2465)
- Accuracy <20 ppm with internal calibration
<150 ppm with external calibration†
- Sensitivity 250 fmol – bovine serum albumin (loaded)
250 amol – Glu-1-Fibrinopeptide B (loaded)

† Nearest neighbour external calibration on FlexiMass™-SR48 target, within 30 minutes

All performance data are acquired using standard test samples on a FlexiMass™-SR48 stainless steel target.



The MALDI-8020 is designed and manufactured under the Kratos Analytical Ltd. quality management system and is CE compliant, CB certified and is tested to UL standards. The MALDI-8020 is a Class 1 laser product.

Installation and initial training will be provided by a team of experienced engineers and applications specialists world-wide.

The instrument is covered by a 12 month warranty.

Please contact your local representative for details on full service contracts.



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