Mira Flex Packages



Customized Metrohm Instant Raman Analyzers (Mira) for your unique applications



Mira Flex – identification and verification of materials made fast and easy

Handheld Mira devices make identification and verification of materials fast, easy, and reliable – for everyone. Mira devices are available in flexible packages allowing you to select customized kits depending on your industry's precise requirements. The robust design of the Mira platform meets the specifications of MIL-STD-810 making Mira devices an ideal tool for use even in harsh environments.

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- Customize the Flex system with only the attachments you need
- Customizable reports
- Customizable operating procedures
- Wide variety of sampling options

Evaluation Type

- Material verification (Mira P Flex) based on spectral library
 - Multi-component identification with Mixture Matching (Mira P/DS Flex)

- with Pass/Fail results Material identification
- searching (Mira P/DS Flex)

Smart Acquire (Mira DS Flex)

• The Mira DS Flex intuitive operation requires no instruction: Turn it on, put it on the sample, touch the screen, and get a result - that's it!

Barcode scanning (Mira P Flex)

- Barcode scan automatically selects operating procedure and populates:
- Lot
- Batch
- Container



- Foolproof operation with controlled user interface
- Automatic report generation
- Seamless transition between samples

Fast: Results in seconds



- Increase throughput
- Move quickly from sample to sample
- Complete analysis in seconds



- Discriminatory algorithms
- Customizable model building
- Clear results

Smart sampling attachments for a wide range applications and enhanced user safety

Mira

⚠ Metrohm

Raman

Metrohm Raman

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Unique flexibility meets your needs

With a uniquely comprehensive set of smart sampling attachments available, customize your Mira Flex package to verify the contents of any container.

• Point-and-shoot Attachments

Three optional Point-and-shoot Attachments are available for the Mira Flex packages. The SWD is used for direct contact or thin bags while the LWD and XLWD are for thicker containers such as glass bottles or thick sight glass in a process line.



Contact Ball Probe
 Verify materials by simply immersing the Contact Ball
 Probe into a liquid or powder.

• Standoff Attachment
Identify substances from a
distance with the Standoff
Attachment, e.g., by standing
in a door way and scanning
a container from across the
room.

Tablet Holder

A spring-loaded mechanism holds large and small tablets for final formulation analysis.



• Vial Holder

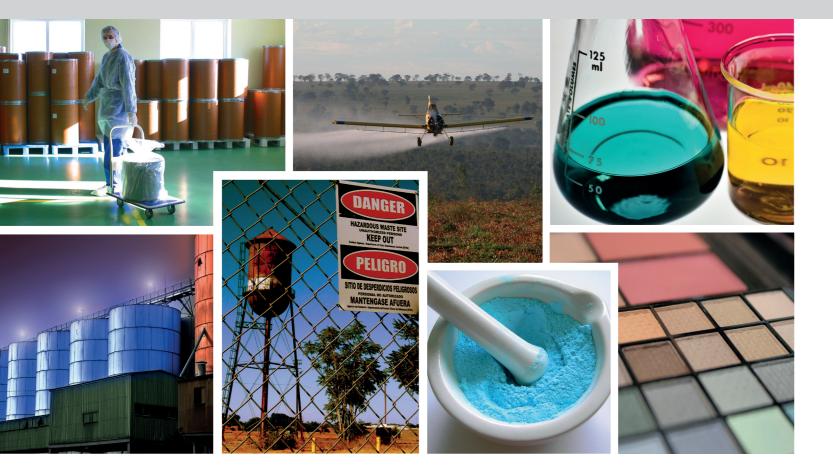
The vial holder attachment permits the user an easy, convenient way to measure liquid samples, or even powdered samples that are stored in vials.



• Universal Attachment Identify powders and liquids

in plastic bags or through bottles using the Universal Attachment. Calibrate/Verify Accessory (CVA)

Available for the Mira P Flex only, the CVA consists of an ASTM Raman shift standard and a NIST-traceable verification sample following USP/EP guidance.



Mira Flex Packages – Ready to conquer any application

Mira Flex Packages are adaptable for many different applications and industries.

| Mira Flex Applications | Mira Flex Industries |
|---|--|
| Raw material verification | Pharmaceuticals |
| Narcotics ID | Defense, safety, security and forensics |
| Blend uniformity | Art and archeology |
| Chemical analysis | • Cosmetics |
| Counterfeiting | Food integrity (food safety) |
| Conservation | Gems and minerals |
| • Defect analysis | Medical |
| • Explosives | Nanotech |
| • Gemology | Nutraceuticals |
| Hazardous chemicals | Petroleum and petrochem |
| Polymers and plastics | Plastics and polymers |
| Toxic industrial chemicals (TICs) | Research laboratories |
| Toxic industrial materials (TIMs) | • Surface Enhanced Raman Scattering (SERS) |
| SERS applications | Teaching and education |

True single-handed operation

Superior usability

Mira handheld devices are hard to beat when it comes to convenience. Due to their small size (just $13.0 \times 8.5 \times 4.0$ cm), they fit into your pocket and enable true single-handed operation.



Scale 1:2

Mira handheld Raman Spectrometer

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Technical Data

| Mira Flex 785 | |
|-------------------------------|--|
| Laser (excitation wavelength) | 785 nm ± 0.5 nm |
| Laser Output Power | 100 mW, 50 mW at sample, 5 adjustable laser powers down to 10 mW |
| Collection Optics | 5 mm working distance; 0.04 spot size, 2.5 mm raster size |
| Collection Techniques | Orbital Raster Scan (ORS™) to average over the sample |
| Exposure | Automatic modes (100 ms minimum) |
| Battery | 2 AA Batteries, Lithium ion, >4 hours operation |
| Weight | 0.705 kg |
| Size | 88.2 × 126.5 × 45.3 mm |
| Operating Temperature | -20 °C to +50 °C (continuous) |
| Ruggedization | MILSPEC 810G, IP67 Certified |
| Display | High visibility, glove compatible, color touch screen |
| Security Log in | PIN Code (Mira DS Flex) User login (Mira P Flex) |
| Measurement Accessories | Comprehensive set of Smart Attachments |
| Laser Class | Class 3B |
| Compliance | CE certification |

www.metrohm.com

