



MOBILE FT-IR SPECTROMETER

# MOBILE-IR II

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Bringing the lab to the field

Innovation with Integrity

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# YOUR FT-IR IS GOING PLACES



## What is the MOBILE-IR II?

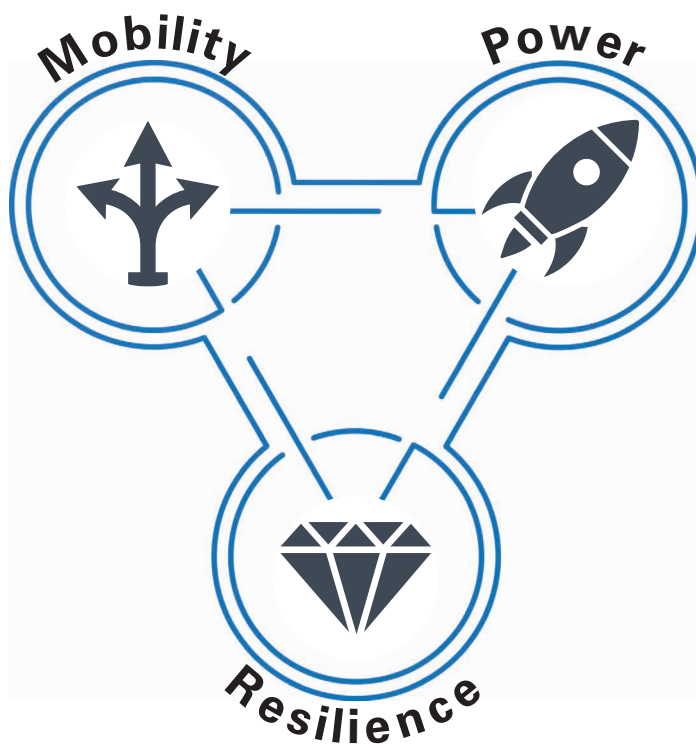
A portable FT-IR spectrometer with true laboratory performance. You never have to sacrifice performance or spectral quality for mobility and reliability when you are on the road with MOBILE-IR II.

## When to use the MOBILE-IR II?

Often it is more convenient and time-saving to take the analyzer with you to the field instead of sending samples and waiting for a lab result. This is exactly when MOBILE-IR II will be your best friend, simplifying your daily routine.

## Who should use the MOBILE-IR II?

For anyone who is hands-on with the application, be it routineers, researchers, first responders, or law enforcement. Any application that has an on-site component can be “mobilized” and made more productive by MOBILE-IR II.

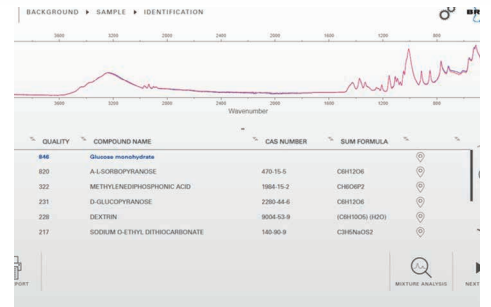
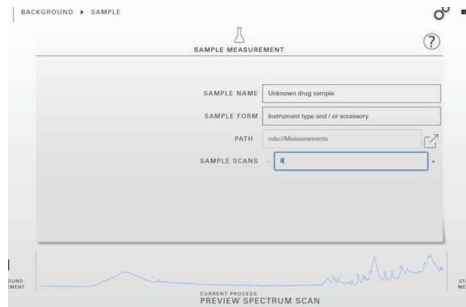


## This defines the MOBILE-IR II:

- World's only portable FT-IR spectrometer with true lab-grade performance
- Rugged build (IP65) that withstands harsh environmental conditions
- Highest engineering quality and up to 10 years component warranty



## As simple as the ABC: our measurement workflows



OPUS TOUCH clearly communicates what is going on with big, easily readable text and a clean interface.

Preview spectra help optimize your experiments while the “?”-icon provides interactive help.

Ideal for beginners and non-experts: results in OPUS TOUCH are presented in a very comprehensible way.

# APPLICATIONS EXAMPLES

## Polymer Recycling | Docking Area

Used plastics are often brought to recycling plants in large quantities. With mobile chemical analysis, these plastics can already be identified directly on the transport vehicle and sorted right away. Preparing and transporting of samples to the laboratory can be skipped, saving time and efforts.

## Mobile Lab | Portable Lab

A mobile laboratory can cover many purposes, especially when chemical analysis has to be performed directly and on-site. Examples are environmental analysis, harmful substances such as explosives, archeology, species restoration, soil sampling, or even troubleshooting during production.

## Forensical Analysis | Police

Whether it is first responders or law enforcement; both are often confronted with unknown and potentially hazardous chemical substances. The MOBILE-IR II provides chemical analysis in critical situations and helps to collect evidence during field operations.





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#### Mobile QC | Warehouse

Logistics efforts are ever-increasing and specialized storage units have more and more tasks to fulfill. Especially with a high turnover of goods, time is money and sending samples to a laboratory can lead to delays. The MOBILE-IR II brings the laboratory into the warehouse and increases the efficiency of quality control in daily routine.



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#### Harm Reduction/Prevention | NGO

Globally, the use of recreational drugs is on the rise and harm reduction approaches have proven to prevent death, injury, disease, overdose, and substance misuse. Usually, chemical analysis is needed during crowded festivals or similar events. Here, the MOBILE-IR II supports harm prevention efforts with a sturdy and ruggedized build.

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#### Exploration | Mining

The demand for oil and gas, gems and minerals is steadily increasing. With MOBILE-IR II explorers can analyze soil layers directly at the mining site and thus provides first-hand information about the availability of such valuable materials.



# OPUS TOUCH GUIDES YOU

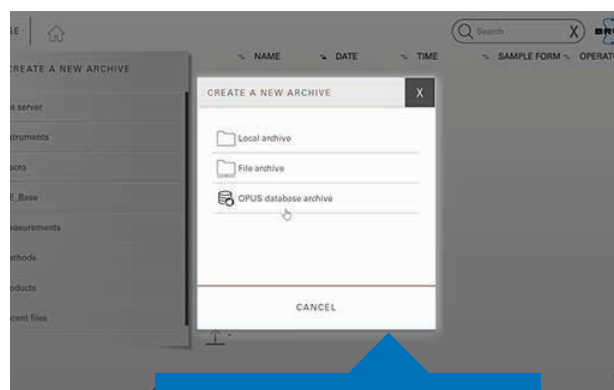
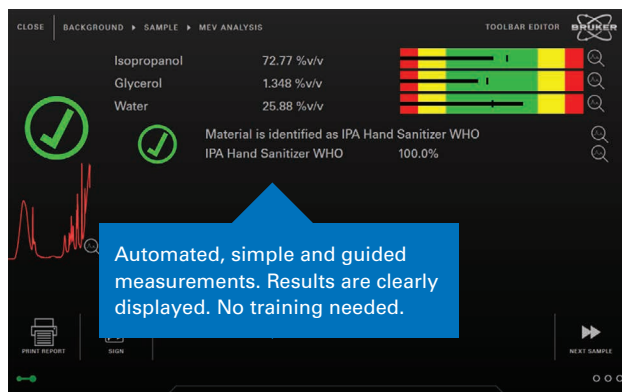


## Smart interface and analytical freedom

OPUS TOUCH is a complete IR spectroscopy software based on a modern touch-centric user interface. Of course, the software can also be operated with mouse and keyboard.

But most importantly, it provides easy access to chemical analysis for newcomers and beginners, while offering full instrument control for FT-IR experts. It's designed for productivity and delivers what it promises:

## Ambiguity no. Clarity yes.





### Take everything with you.

The rugged MOBILE-IR II already withstands harsh environments, but its IP67 travel-case makes it even more robust, protecting it from waterjet stream and dust.

The included trolley also offers the necessary space for your spectrometer, its accessories and the IP65 protected tablet PC. Now, you can safely transport your FT-IR lab anywhere.

### Rock & Roll.

MOBILE-IR II features our famous RockSolid™ cube corner interferometer. For more than a decade it has remained the benchmark for FT-IR measurements with utmost reliability.

Even when you are faced with difficult work environments it keeps its stability and delivers pure la-performance. And it does all that in a smart suitcase that rolls wherever you go.

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# SMART & PRACTICAL

## Precision High-Pressure Clamp

The MOBILE-IR II comes with an easy-to-use high pressure ATR clamp to provide easy sampling and uniform pressure to get good FT-IR spectra. Its open access design allows you to measure large samples without any problems.



MOBILE-IR II  
FEATURES

## Ruggedized Tablet PC

A robust spectrometer needs a robust PC. The included ruggedized tablet comes with IP65 and MIL-STD-810G approved standards. The tablet PC enables measurements in standing, sitting or squatting position.





### Heatable ATR Sample Trough

The heatable ATR trough is perfect to measure liquids and to rapidly evaporate solvents.



MOBILE-IR II  
FEATURES

### Wi-Fi, Ethernet and USB connectivity

Either with cable or wireless connection from your spectrometer to the PC, the MOBILE-IR II provides any connection mode that you need.





### Hermetically Sealed Optics

The optics of an FT-IR spectrometer are the heart of the device. Environmental effects, like water vapor, can reduce spectral quality and the overall performance of the device.

The MOBILE-IR II's optics are tightly sealed and encased in a robust metal housing. This prevents environmental disturbances and protects the internal components.

### Anti-Vibration Base

The stability of MOBILE-IR II lies within its foundation. Specifically designed, vibration dampening rubber feet are used to mitigate continuous and sudden vibrations.

Thus, the MOBILE-IR II yields precise and accurate results, even if it is placed in a mobile lab, next to a construction site or inside a lab full of clumsy students.

## TE-MCT Detector



We wanted to give you more power for your applications. The thermoelectrically cooled (TE-)MCT detector not only provides exceptional stability, but also boosts measurements speed and signal to noise.



## Data Safety and Transfer



Many users consider the security and integrity of their IR data as paramount. That's why the MOBILE-IR II offers all standard connectivity options, like LIMS or MES via MS SQL or cloud services connectivity.



## BE MOBILE. STAY MOBILE.

A device as flexible and portable as the MOBILE-IR II needs an optimal support network. Bruker services extend globally making sure your service and validation needs are addressed all over the world.



### Technical Data

<b>Sample Interface</b>	Diamond-ATR interface, approx. 1.2 mm x 1.2 mm
<b>Heating Interface</b>	Software controlled heating of sampling area up to 80°C
<b>Sealing and Resilience</b>	IP65 standard, metal housing, vibration damped, resistant to high-humidity ( $\leq 80\%$ relative humidity)
<b>Detector and Interferometer</b>	TE-MCT detector (cryogen-free); RockSolid™ wear-free interferometer
<b>Spectral Resolution and Spectral Range</b>	Standard: 2 $\text{cm}^{-1}$ (optional: 0.8 $\text{cm}^{-1}$ ); 6000 $\text{cm}^{-1}$ – 670 $\text{cm}^{-1}$
<b>Wavenumber Accuracy</b>	$< 0.05 \text{ cm}^{-1}$ @ 1576 $\text{cm}^{-1}$
<b>Wavenumber Precision</b>	$< 0.0005 \text{ cm}^{-1}$ @ 1576 $\text{cm}^{-1}$ (standard deviation of 10 repeated measurements in laboratory conditions)
<b>Dimensions and Weight</b>	21 cm x 33 cm x 20 cm (w x d x h); Approx. 10.5 kg



Laser class 1 product.

### The MOBILE-IR II at a glance

- Lab-grade FT-IR performance
- Integrated battery
- Intuitive operating software
- Compact and ruggedized design
- IP65 protected spectrometer housing
- Ruggedized tablet (IP65 and MIL-STD 810G)
- Super-robust trolley (IP67)
- Wireless operation (Optional)

Bruker Optics is continually improving its products and reserves the right to change specifications without notice.  
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