

Press Release

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New: IRAffinity-1 Best FTIR system in its class

**Highly sensitive and reliable /
For routine applications, research and development /
Automated accessories recognition, USB interface, extended
software functions**

Shimadzu, one of the world-leaders in analytical instrumentation, introduces the IRAffinity-1, which represents a new generation of FTIR instruments. It is designed for high-sensitivity and versatile IR applications in pharmacy, industry, environment, research and education. The IRAffinity-1 excellently complements the existing FTIR series.

The sensitivity of this system has been increased significantly. The signal-to-noise ratio, a measure for the quality of an FTIR instrument, is 30000:1 and higher. This makes the IRAffinity-1 the best in its class. For instance, with a resolution of up to 0.5 cm^{-1} , the FTIR application area can be extended to the interpretation of the rotational fine structures of gases.

Highly sensitive and reliable

A high-energy ceramic light source and a suitable detector system for the mid-infrared range – a temperature controlled DLATGS detector

(deuterated L-alanine tryglycine sulfate) – ensure the high sensitivity of the IRAffinity-1.

The IRAffinity-1 has proven its reliability in numerous tests. Patented processes for optimization of the interferometer, such as ADA (Advanced Dynamic Alignment) and FJS (Flexible Joint Support) ensure stable and reproducible instrument operation. This is why the IRAffinity-1 only requires short warming-up times. The interferometer is protected from humidity by the sealed optics, automatic drying system and the moisture-protective coating on the hygroscopic beam splitter. This design is based on the requirements of the Japanese and European Pharmacopoeia and the system test according to ASTM 1422.

Small footprint, large sample compartment

The IRAffinity-1 “lives” on a small footprint. The bench space has been decreased by approximately 20 % when compared with its predecessor generation. Still, there is enough room for a standard sample compartment which can incorporate numerous accessories and, in this way, offers users the greatest possible flexibility for many different applications.

Automatic accessory recognition, USB interface, extended software functions

When an accessory is installed in the IRAffinity-1, the IRsolution software indicates with corresponding ID number which type is deployed and suggests a suitable parameter set.

The FTIR instrument is PC-controlled via a USB connection. The included IRsolution software is extremely user-friendly and fulfills the complex requirements of research and development while also supporting standard use in quality control and assurance. The IRsolution software complies with GLP/GMP and FDA 21 CFR Part 11 regulations and with ISO 9000.

With the introduction of the IRAffinity-1, the IRsolution software has obtained two additional indispensable standard functions for testing of, for instance, pharmaceutically active compounds. The program “Foreign Material” tests contaminations of substances by foreign matter and the “Pharmacopoeia Compatible” program is available for substance identification.



Caption: The best FTIR system in its class – IRAffinity-1 is suitable for routine applications as well as for research and development. The software has been extended with new functions. In spite of its small footprint, the instrument features a large sample compartment.

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