

## Press Release

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analytica

### **New FTIR Spectrophotometer It's a matter of specs**

**IRTracer-100: supreme performance and accuracy  
for infrared analysis /  
Quick and easy material analysis /  
LabSolution IR software with library**

Shimadzu, one of the world leaders in analytical instrumentation, provides the IRTracer-100 middle class Fourier Transform Infrared Spectrophotometer which analyzes materials quickly and easily in a variety of fields such as pharmaceuticals, food, chemicals and electronics, and monitors high speed reactions within a few seconds.

Compared to the well-reputed predecessor model IRPrestige-21, the easy-to-operate IRTracer-100 features highly improved sensitivity, resolution and scan speed with expandability and easy maintenance. IRTracer-100 can quickly and easily obtain high quality data of small samples through 1.5-times higher sensitivity and high speed scanning of 20 spectra/sec.

IRTracer-100 achieves 60,000:1 SNR (signal-to-noise ratio) with improved interferometer and detector, and high speed reaction monitoring function for these demands. Combining with the LabSolutions IR Contaminant analysis program makes analysis of small samples easier, quicker and more accurate. LabSolutions IR on IRTracer-100

can be connected to Network system with LabSolutions software for LC/GC, and unifies management of obtained data and users to access the systems for pharmaceuticals demands.

### **Features in detail**

- **Analysis by High Sensitivity 60,000:1 SNR**

IRTracer-100 can quickly and easily obtain high quality data of small samples from 1 mm to 10  $\mu\text{m}$ . LabSolutions IR analysis program achieves results within a few seconds – compared to one hour duration using conventional means. IRTracer-100 also obtains high quality spectra of ppm-order additives and identifies them easily.

- **High Speed Reaction Monitoring by High Speed Scanning**

Shimadzu's predecessor model IRPrestige-21 recorded spectra every 5 seconds, but the IRTracer-100 can obtain 20 spectra in a second in rapid scan mode (option). IRTracer-100 precisely monitors high-speed reactions such as curing of UV curable resin.

- **High Performance LabSolutions IR software**

LabSolutions IR on IRTracer-100 enables connection to other laboratory hardware, for example LC and GC systems, and unifies management of obtained data. The number of spectra in standard IR libraries has been expanded from 1,000 to 12,000, and identification of unknown samples can be done with the standard system. The unique Easy Macro program supports easy-to-use operation – even by less-experienced operators.

### **Example contaminant**

Analysis of contaminants in/on products is very important in many industries such as pharmaceuticals, cosmetics, food, chemicals and

electronics, and life science. The size of the contaminants has become as low as 10  $\mu\text{m}$ , and higher sensitivity as well as ease-of-operation are required since not all operators are specialists in IR analysis. Development of new materials requires the monitoring of reactions.

FTIR (Fourier Transform Infrared) technology is used for Research & Development and Quality Control. FTIR obtains infrared spectra which are absorbed by or reflected from samples using Fourier Transformation. The sample is identified by comparison of spectral patterns. Chemical structures of samples are estimated by peak positions. Concentration of samples is calculated by peak intensities.



**Figure 1:** Fourier Transform Infrared Spectrophotometer IRTracer-100 for quick and easy material analysis

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