

Introducing new FTIR narcotics libraries

You catch the perpetrators,
we make sure the science is right.

Fourier transform infrared (FTIR) spectroscopy, especially attenuated total reflectance (ATR) FTIR spectroscopy, has long been part of the analytical toolbox used by the forensic community and law enforcement agencies to combat the opioid crisis. When reference spectra are available, most compounds can be unambiguously identified based on their IR spectra. IR spectroscopic signatures are based on molecular functional groups, even if the exact compound is not present in the libraries, the list of matching compounds from a spectral library search can often lead to classification or identification of the material.

Benefits of FTIR:



FTIR allows for quick and reliable identification of illicit drugs and lacing agents with minimal sample preparation.



FTIR can analyze a small amount of sample (milligrams or less), in both solid and liquid forms.



FTIR is a nondestructive technique that allows subsequent analysis by a secondary technique.

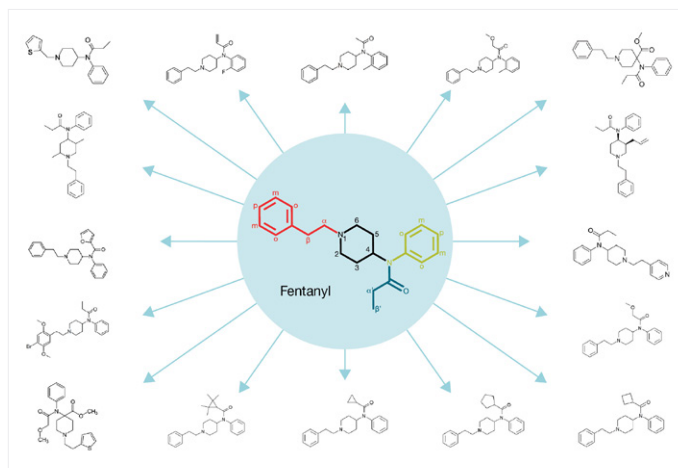


FTIR is highly discriminatory. FTIR can differentiate constitutional isomers, geometric isomers, diastereomers and free base/acid and salt forms.

Thermo Scientific is adding two narcotics libraries to our extensive library collections.

- **New:** Thermo Scientific™ Nicolet™ Narcotics FTIR Spectral Library is complete with a total of 883 spectra of new psychoactive substances including fentanyl.
- **New:** Thermo Scientific™ Nicolet™ Fentanyl Analogues FTIR Spectral Library is a dedicated library for fentanyl analogues with 184 spectra, including over fifty structural isomers.

*The majority of spectra in the libraries are created from certified reference standards. Where these do not exist, qualified street samples or synthetic compounds from certified laboratories are used.



The structure of fentanyl and various fentanyl analogues.



Thermo Scientific™ Nicolet™ iS20 FTIR Spectrometer.



Thermo Scientific™ Nicolet™ iS50 FTIR Spectrometer with FT-Raman module.

Learn more at thermofisher.com/FTIR-forensic-library

thermo scientific

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