

Foster+Freeman *ffTA* and *Foram* compatible

# Raman Spectra Libraries

For the rapid identification of unknown materials by Raman spectroscopy

Users of the Foster + Freeman *Foram* (all models) and *ffTA* (with Raman module fitted) can now further enhance the capabilities of their instruments through the purchase of additional Raman Spectra Libraries for the identification of unknown materials and compounds.

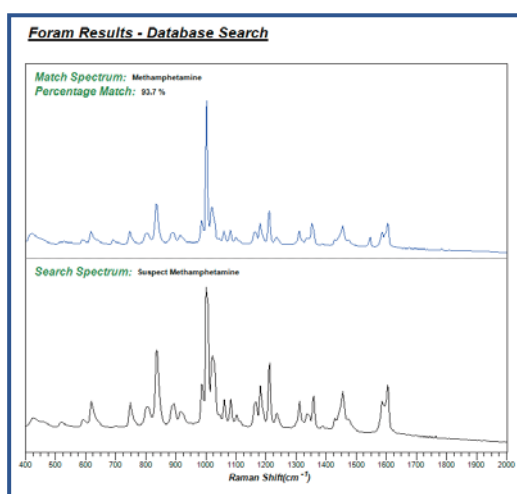
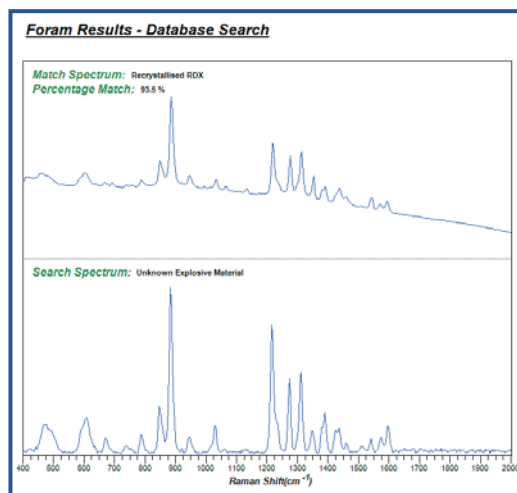
A comprehensive collection of libraries has been compiled by S.T. Japan and formatted for use with *Foram* and *ffTA* systems.

In total over nine thousand spectra of common and specialist materials are available divided into 20 categorised libraries including:

- Forensic Compounds
- Pharmaceuticals, Drugs and Antibiotics
- Hazardous and Toxic Chemicals
- Dyes, Pigments, and Stains
- Solvents

With the *Foram* software it is possible to search against spectral libraries providing details of the exact composition as well as all additional information such as manufacturer, lot number, appearance, purity, IUPAC name, common name, and other details.

See overleaf for a complete list of available libraries.



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## S.T. Japan Raman Spectra Libraries

Spectra were measured at the National Institute of Advanced Industrial Science and Technology (AIST) in Japan and by scientists at S.T. Japan, Inc.

### Features:

- Highest sample purity used
- All spectra have been reviewed and evaluated
- Spectral range 4000 cm<sup>-1</sup> to 200 cm<sup>-1</sup>
- Databases can be chosen by spectral resolution: 1 cm<sup>-1</sup>, 2 cm<sup>-1</sup>, and 4 cm<sup>-1</sup>
- Name, CAS number, molecular formula, and additional information with most spectra
- Lists of compounds/spectra in each database are available in pdf format

## Foster + Freeman Forensic Raman Spectra Library

Order Code: fFTA/RD2

Measured using Foster + Freeman equipment at Strathclyde University  
86 Raman spectra of compounds associated with forensic evidence.

## S.T. Japan Forensic Spectra Library

Order Code: fFTA/RD1

748 Raman spectra of compounds commonly of interest in the forensic laboratory.

## Additional Raman Spectra Libraries

Order Codes available upon request

- **Polymer and Polymer Additives Spectra Database,**  
929 Raman spectra of polymers, plastics and polymer additives.
- **Food Additives and Food Packaging Spectra Database,**  
1,075 spectra of substances added to food, including substances regulated by the FDA. Also spectra of indirect food additives: substances that come into contact with food such as packaging and processing.
- **Solvents Spectra Database,**  
469 Raman spectra of solvents.
- **Biochemicals Spectra Database,**  
1,900 Raman spectra of Biochemicals partly including vitamins, resins, starches, glycerides, fatty acids, sugars, carbohydrates, proteins and peptides.
- **Aldehydes and Ketones Spectra Database,**  
1,079 Raman spectra of Aliphatic and Aromatic Aldehydes and Ketones.
- **Alcohols and Phenols Spectra Database,**  
891 Raman spectra of Alcohols and Phenol.
- **Esters, Lactones, and Anhydrides Spectra Database,**  
2,935 Raman spectra of Carboxylic Acids, Esters, Lactones and Anhydrides.
- **Hydrocarbons Spectra Database,**  
565 Raman spectra of Hydrocarbons and Halogenated Hydrocarbons.
- **Pesticides Spectra Database,**  
468 Raman spectra of pesticides including insecticides, herbicides, algacides and fungicides.
- **Semiconductor Chemicals Spectra Database,**  
371 Raman spectra of chemicals used in the Semiconductor industry.
- **Flavors, Fragrances, and Cosmetics Spectra Database,**  
1,030 Raman spectra of flavors, fragrances, and ingredients used in the cosmetic industry.
- **Dyes, Pigments, and Stains Spectra Database,**  
300 Raman spectra of selected dyes, pigments, stains and indicators.
- **Sulfur and Phosphorus Spectra Database,**  
977 Raman spectra of sulfur and phosphorus.
- **Hazardous Chemicals Spectra Database,**  
1,361 Raman spectra of chemicals included in the EPA Cameo Database for and USCG Chris Hazardous Chemicals database.
- **Hazardous and Toxic Chemicals Spectra Database,**  
3,035 Raman spectra of chemicals included in the EPA Cameo Database, the USCG Chris Hazardous Chemicals database, the NIOSH Guide to Chemical Hazards Databases and including chemicals regulated under the Toxic Substances Control Act.
- **Pharmaceuticals, Drugs, and Antibiotics Spectra Database,**  
1,172 Raman spectra of active substances and aids commonly used in pharmaceutical industry.
- **High Production Volume Chemicals Spectra Database,**  
697 Raman spectra of substances included in the HPV Challenge Program Chemical List.
- **Minerals and Inorganic Materials Spectra Database,**  
1,419 Raman spectra of minerals and inorganic materials. (Spectral range 1500 – 200 cm<sup>-1</sup>)
- **Minerals Spectra Database,**  
454 Raman spectra of minerals, extracted from database 60022. (Spectral range 1500 – 200 cm<sup>-1</sup>). Spectra are not included in 60001.
- **Inorganic Materials Spectra Database,**  
965 Raman spectra of inorganic materials, extracted from database 60022. (Spectral range 1500 – 200 cm<sup>-1</sup>).
- **The Complete Raman Spectra Database,**  
Contains all libraries, a total of 8694 Raman spectra.

## Search Results

% Match	Spectrum Name
60.7	Example 1
59.2	PETN
57.3	2.4 DNT
55.6	TNT
55.6	2.6 DNT
55.0	Example 3
54.6	Example 4