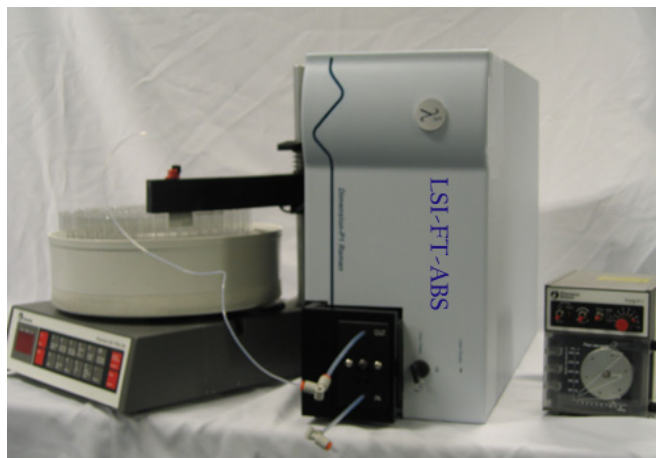




The LSI XL-FT-ABS

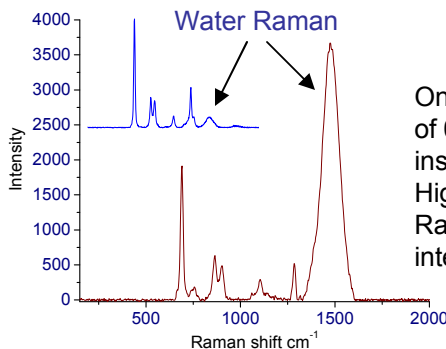
Ultra High Performance Flow-Through Raman Systems.

The LSI Dimension XL-FT-ABS represents the first true on-line fluid monitoring by Raman spectroscopy, providing exceptional sensitivity through proprietary optical design and real ease of use with LSI RamanSoft's RealTime Monitoring. This systems integrates LED-based absorption to further extend compositional analysis.



The quartz-teflon flow cell system is compatible with aqueous and non-aqueous monitoring needs:

- In Line Process Control
- Reaction Monitoring
- Off-line Automated Sampling



One second Raman spectrum of 0.5% ethanol in water; insert, 10% ethanol in water. High sensitivity provides water Raman for automatic internal standardization

The XL-FT-ABS features:

- quartz flow cell custom designed & integrated with proprietary illumination and signal detection optics
- Princeton PIXIS CCD (front illuminated and deep depleted models available)
- Spectral coverage from 60-3100 cm^{-1} ; Customizable
- Spectral resolution to 1.5 cm^{-1} per pixel
- High sensitivity: aqueous SO_4^{2-} in PPM's, water Raman peak in one second
- Robust design for demanding 24/7 process monitoring
- TE cooled laser, power adjustment up to 900mW w/785nm laser
- Built-in Independent absorption measurement (UV or Visible)
- Proven reliability in demanding semi-conductor manufacturing applications