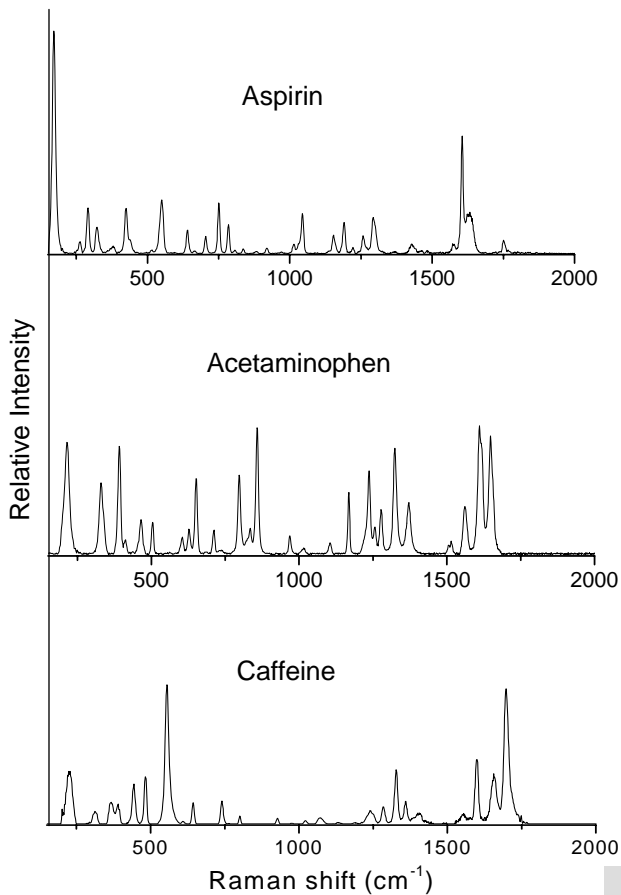
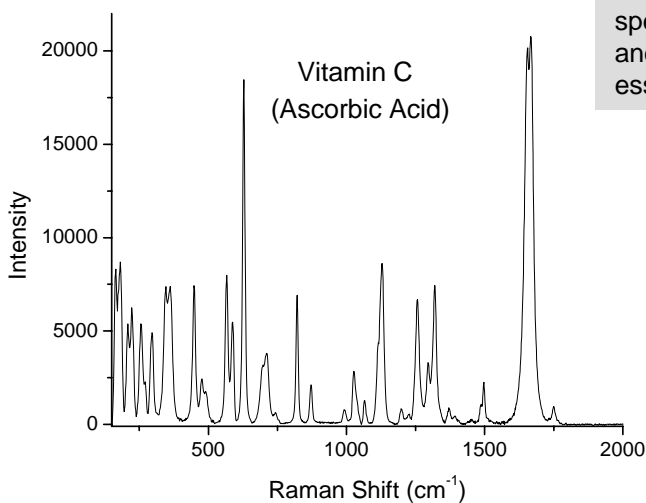
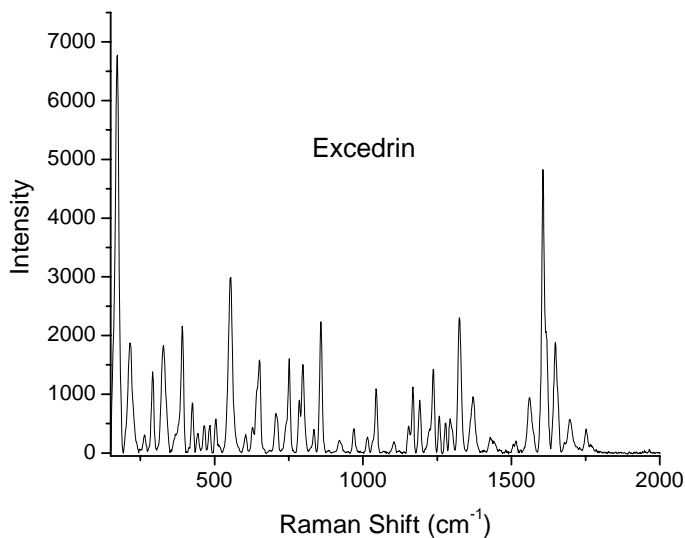


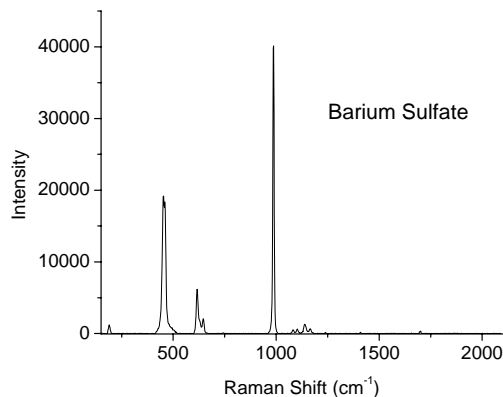
Pharmaceutical Sample Identification and Analysis



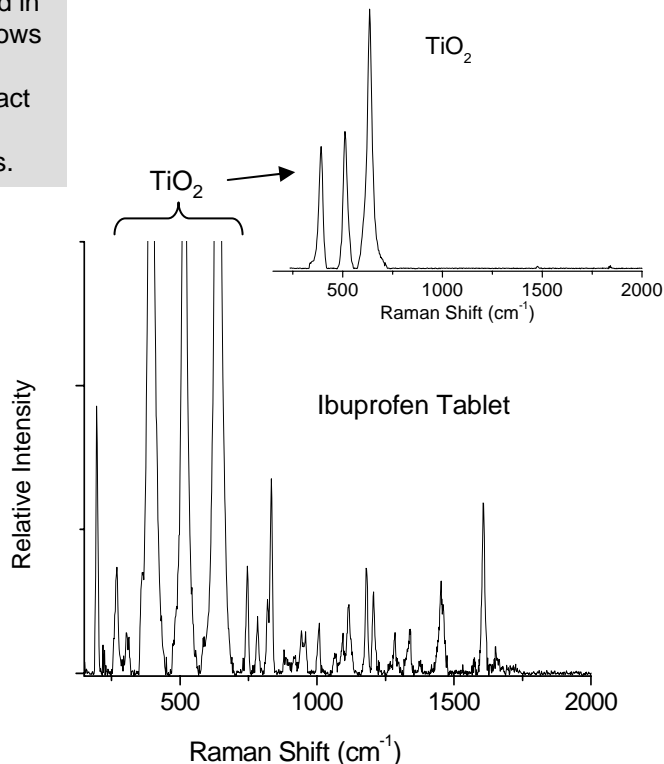
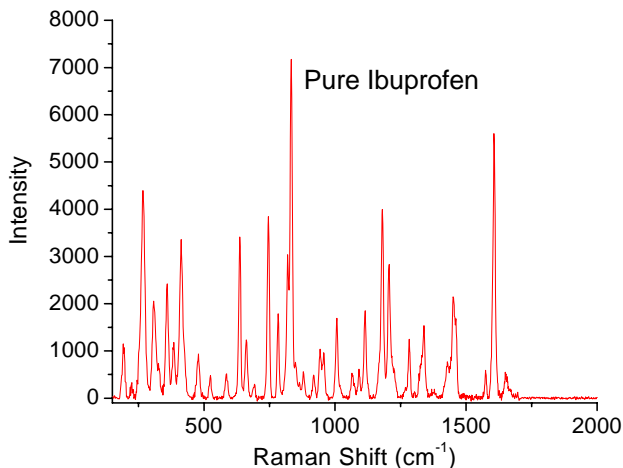
The high resolution and sensitivity of the Dimension-P1™ Raman HR system allows for rapid identification and analysis of drug constituents. For example, aspirin, acetaminophen, and caffeine present in ratios of 4:4:1.1 can be identified and quantified in Excedrin by their unique Raman peaks.



Dimension-P1™ and RamanSoft™ are important tools for the analysis of critical additives with distinct Raman spectra, such as ascorbic acid, a nutraceutical substance and an anti-oxidant, and barium sulfate, an inorganic salt essential to create radio opacity for surgical catheters.



Many drug formulations contain high concentrations of excipients such as the whitening pigment TiO_2 found in ibuprofen tablets and capsules. Raman analysis allows for quantification of these constituents, and in the case of TiO_2 it also permits quality control of the exact crystallization state of this inorganic pigment by analysis of Raman shift and relative peak intensities.



Raman analysis of drugs and pharmaceuticals with Dimension-P1™ can be critical in the identification of drugs of abuse, for example the stimulant ephedrine, and can assure the quality and purity of drugs such as theophylline, a critical substance in the treatment of asthma and other acute respiratory disorders.

