Renal Stone Profile	
Description	The content of renal stones can be determined by infra-red spectroscopy or X-ray crystallography. In cases where the presence of a compound is uncertain there are a number of supporting wet chemical methods to determine composition.
Indication	Nephrolithiasis (urolithiasis, renal stone formation)
Additional Info	Renal stones (renal calculi) are solid accumulations of material that form in the tubal system of the kidney. They will occur in 8-15% of Europeans and North Americans during their lives. The majority of stones (~80%) are composed of calcium oxalate and the remainder are composed of uric acid (5-10%), struvite or carbonate apatite (secondary to infection), cystine (~1%) and rare stones. Kidney stones cause problems when they block the flow of urine through or out of the kidney. When the stones move along the ureter, they cause severe and colicky pain. The composition of renal stones can provide valuable information regarding the possible aetiology of renal stones and therapeutic approach.
Concurrent Tests	N/A
Dietary Requirements	N/A
Interpretation	The chemical analysis of renal stones is just one aspect of the management of patients who have renal stone disease. Some experts argue that stone analysis is an essential component to the management of the patient. The identification of cystine, xanthine and 2,8-dihydroxyadenine can lead to specific diagnosis and treatments. The composition of the centre of the stone can give an insight into the environmental condition at the initiation of the stone formation process. The detection of magnesium ammonium phosphate indicates a chronic infection state.
Collection Conditions	No preparation required. Samples should be in a sterile container and must be clearly labeled
Frequency of testing	Usually repeat is not required.