

# Chemical composition analysis of 649 urinary stones

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## **Abstract**

Background: Chemical composition analysis of urinary stones is a fundamental part of the metabolic workup of urolithiasis. Aim: To report the chemical composition of urinary stones using infrared spectroscopy. Material and Methods: The chemical composition of urinary stones recovered from 649 patients aged 1 to 97 years (68% males), were analyzed using a Perkin Elmer FTIR Spectrometer, Spectrum Two. Results: Calcium oxalate monohydrate was the most common composition found in 45% of cases, followed by mixed composition, which included three ammonium phosphate stones in 29% of cases. Pure uric acid composition was found in 16% of stones. Three cystine stones were detected. Conclusions: These findings do not differ from those found in developed countries. © 2021 Sociedad Medica de Santiago. All rights reserved.

## **Author keywords**

Calcium Oxalate; Spectrophotometry; Urolithiasis