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MINERALOGICAL COMPOSITION ANALYSIS ON CERTAIN HUMAN GALLBLADDER STONES USING X-RAY DIFFRACTION TECHNIQUE

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ABSTRACT

The present investigation aims to determine the mineralogical composition of certain human gallstones using Powder X-Ray Diffraction technique (PXRD). The minerals present in the samples are identified by analysing Bragg's angle (2θ), Lattice spacing (d), Miller Indices (h k l) and full width at half maximum (FWHM) values of the sample with the standard data. Results suggest that calcium phosphate or calcium carbonate with or without magnesium content is the most predominant mineralogical component in gallstones.

KEYWORDS: Gallstones, X-Ray Diffraction, Bragg's Angle and Miller Indices