Phase, element, amino acid, structural composition of gallstones

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Abstract

Studying biominerals and biogenic mineral formation in live organisms is very important in biomineralogical research. A series of stones removed surgically from the patients of Regional hospital and Emergency Hospital of Omsk was investigated. By XRF and IR-spectroscopy methods it has been established that principal components of gallstones are: cholesterol (92% from the investigated collection); cholesterol with bilirubin component (6%); calcium carbonates of different modifications in cholesterol stones: aragonite, vaterite, calcite (16%) with predominance of vaterite modification (9%). The study of cholesterol obtained from the extraction department supplied us with more complete information about the composition of gallstones.