

## NIR-FT RAMAN SPECTROSCOPIC STUDY OF LIVER AND STOMACH CANCER

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Human organs such as liver, stomach, heart and kidney are very complicated and heterogeneous substances, which contain proteins, lipids, water and carbohydrates in different amounts. NIR-FT Raman spectra of these tissues revealed mainly the characteristics of proteins and lipids. In order to be able to discriminate normal tissue from cancer tissue, we investigated the spectra of liver and stomach samples from humans. FT Raman spectroscopic data were collected from normal and cancer tissue of liver and stomach obtained from surgical procedure. The resulting spectra allow a classification of the tissues into each samples. The principal peaks from normal liver tissue are observed at 644, 1002, 1029, 1091, 1158, 1265, 1312, 1341, 1447, 1604, 1663 and 1669  $\text{cm}^{-1}$ . While the peaks of liver cancer tissue are observed at 232, 1001, 1092, 1126, 1154, 1341, 1448 and 1659  $\text{cm}^{-1}$ . The principal peaks from normal stomach tissue are observed at 522, 619, 755, 893, 1002, 1096, 1124, 1270, 1338, 1451, 1621 and 1660  $\text{cm}^{-1}$ . While the peaks of stomach cancer tissue are observed at 408, 526, 757, 880, 1003, 1081, 1092, 1261, 1321, 1447, 1552, 1611 and 1663  $\text{cm}^{-1}$ .

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