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Abstract Submitted

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Detection of carotenoids present in blood of various animal species using Raman spectroscopy MARYAM LIAQAT, Federal University of Pernambuco, Recife, Brazil, AYESHA YOUNUS, University of Agriculture, Faisalabad, Pakistan, MUHAMMAD SALEEM, National Institute of Lasers and Optronics (NILOP) Islamabad, Pakistan, IMAAD RASHID[1], MARIA YASEEN, SAHER JABEEN[2], University of Agriculture, Faisalabad, Pakistan — Raman spectroscopy is simple stable powerful diagnostic tool for body fluids, tissues and other biomolecules. Human blood possesses different kind of carotenoids that play a key role for protecting the cells from damaging by different viral and bacterial diseases. Carotenoids are antioxidative components which are capable to overcome the attack of different free radicals and reactive oxygen species. Carotenoids are not prepared by human body, therefore it is recommended to eat carotenoids enrich vegetable foods. No standard data is available on the concentration of useful carotenoids component in non-vegetable consumed items. In present research work, Raman spectroscopy is used to compare various blood components like plasma, serum, carotenoids present in blood of different animal species like goat, sheep, cow and buffalo consumed by human. Especially beta carotene is investigated. The Raman shift ranges from 600-1700 cm^{-1} for samples. Different characteristic peaks of the blood components are found which are not characterized before in animal samples.

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