LASER INDUCED BREAKDOWN SPECTROSCOPY OF SOME ORGANIC AND BIOMOLECULES

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Laser induced breakdown spectroscopy (LIBS) of Bacillus Thuringiensis a bio-molecule widely used as a natural pesticide for crops has been performed. Also the LIBS spectrum of Malathion has been recorded. It was found that the bigger molecules get fragmented into their atomic constituents and give their characteristic spectral signature. The concentration of the samples was changed by dilution in water. The concentration dependent calibration curves for different atomic constituents have been obtained. This work is motivated by the identification of the organic and biomedicines by LIBS, a online and real time monitoring technique very suitable for real field applications. Echelle spectrometer, having spectral response in 200 to 780 nm, has been used to record the spectra of the molecules.