
Investigation of plant-related metabolites by Raman Spectroscopy and chemometrics: strategies for next-generation agriculture

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Abstract: In sustainable crop management systems, advanced plant pathogen identification is essential for preventing crop losses by the appropriate application of pesticides, especially in situations where symptoms become visible too late to enable a therapeutic response. By integrating the sensing powers of Raman Spectroscopy with chemometric analysis it is possible to investigate metabolites in fresh leaves to distinguish between healthy and sick plants. This study was funded by the European Union - Next Generation EU M4C2 1.1 within PRIN 2022JZAA9W – SENSEPLANET and by the Agritech National Research Center and received funding from the European Union Next-Generation EU (PNRR) – MISSIONE 4 COMPONENTE 2, INVESTIMENTO 1.4 – D.D. 1032 17/06/2022, CN00000022).