

## NEAR INFRARED SPECTROSCOPY AS EFFICIENT ANALYTICAL TOOL IN PLASTIC ADDITIVES INDUSTRY.

EMANUELE PIZZANO, ASSIMO MARIS, *Dipartimento di Chimica G. Ciamician, Università di Bologna, Bologna, Italy*; MARZIA MAZZACURATI, *Analytical service, BASF Italia S.p.A., Pontecchio Marconi, Italy*.

Near Infrared spectroscopy (NIRs) is a potent tool for the analysis of several materials. It finds vast applications due its versability and finds applications in many fields such as pharmaceutical industry, food science, environmental, bio-applications and medical. In this work we report several applications in plastic additives industry. The determination of specific analytes in this kind of products is challenging without expensive instrumentations or difficult sample preparation. The NIR technique instead, with the application of chemometric approach, permits the quantitative analysis in complex matrix with simple, fast, and cheap procedures. To clarify the structure of the dataset spectra employed in the calibration curve, and so the nature of the bands involved, the calculated NIR spectrum of model compound is also reported and compared to its experimental gas phase counterpart.