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Poster Abstract - B.44

NMR-BASED METABONOMIC STUDY OF TRANSGENIC MAIZE

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The aim of this research was to verify the possibility of identifying and classifying maize seeds obtained from transgenic plants, in different classes according to the modification, on the basis of the concerted variation in metabolite levels detected by NMR spectra. It was possible to recognise the discriminant metabolites of transgenic samples as well as to classify non-a priori defined samples of maize. It is important to underline that the obtained results are useful to point out the metabolic consequences of a specific genic modification on a plant, without using a targeted analysis of the different metabolites, in fact is was possible to classify the seeds also without the complete assignment of the spectra. The analysis was performed by applying multivariate techniques /principal component analysis and partial least squares-discriminant analysis) to NMR data.