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The potential of near infrared spectroscopy to estimate the content of cannabinoids in *Cannabis sativa* L.: a comparative study.

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Abstract

Cannabis has been one of the oldest source of food, textile fiber and psychotropic substances. Cannabinoids are the main biologically active constituents of the *Cannabis* genus, with a demonstrated medicinal value. Its production is becoming legalized and regulated in many countries, thus increasing the need for a rapid analysis method to assess the content of cannabinoids. Gas chromatography (GC) is the preferred analytical method for the determination of these compounds, although is a slow and costly technique. Near infrared spectroscopy (NIR) has the potential for the quantitative prediction of quality parameters, and also of pharmacologically active compounds, but no references about cannabinoids prediction has been previously reported. The aim of the present research was to develop a fast, economical, robust and environmentally friendly method based on NIR technology that allow the quantification of the main

[1] *Both authors contributed equally to this work*

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