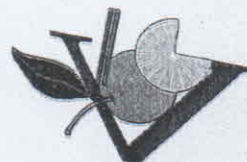


Proceedings of the XVIII Conference
International Organization
Citrus Virologists



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28. EVALUATIONS OF THE EFFECTS OF CANDIDATUS LIBERIBACTER ASIATICUS ON INOCULATED CITRUS PLANTS USING LASER-INDUCED BREAKDOWN SPECTROSCOPY AND CHEMOMETRIC TOOLS

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This analytical study investigated the organic and inorganic constituents of healthy leaves and leaves inoculated with *Candidatus Liberibacter asiaticus* (CLas) of citrus plants. The bacteria CLas is one of the causal agents of citrus greening (or Huanglongbing). For the investigations, it was used laser-induced breakdown spectroscopy (LIBS) combined with chemometric tools. The plants were measured monthly, and the information obtained using the LIBS spectra profiles with chemometric analyses was promising for the construction of predictive models to identify healthy and infected plants. The macro- and microconstituents were relevant to differentiation of the samples condition. The models were performed considering the different times of the inoculation (one, three, five and eight months). The calibration models were effective in classification of 88% to 96% of the samples with a 95% significance level. The novelty of this method is the fingerprinting of healthy and diseased plants based on the organic and inorganic contents.

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