

## USE OF PASSIVE SAMPLERS TO ASSESS EFFECTS CAUSED BY TROPOSPHERIC OZONE IN CROPS AND VEGETATION IN A MEDITERRANEAN COASTAL AREA

**J.M. Delgado-Saborit**, M.A. Querol-Balaguer, V.J. Esteve-Cano  
*Inorganic & Organic Department, Universitat Jaume I, Castellon, Spain*

The aim of the present work is the study of tropospheric ozone levels by means of passive samplers in "La Plana de Castellon", a Mediterranean Spanish coastal area, as well as to assess the possible effects in crops and vegetation of the area. The area of study is characterized by large crops of orange trees, almond trees, olive trees and orchards. Measurement campaigns have been made in summer 2001 with sampling periods of one week. The area of study has been divided into twenty sampling points and measurements have been made with Radiello® passive samplers. A relationship between weekly ozone levels measured by means of passive samplers and AOT-40 calculated from the continuous ozone levels measured by means of the UV-photometric analyzers in two reference sites has been established. With the estimated AOT-40 it's has been assessed which crops are exposed to ozone levels above and below the EU limit values established by the Directive 2002/3/EC. As well, it has been assessed the likely effects in orange trees, almonds trees and other crops caused by tropospheric ozone. Acknowledgements Authors are grateful to the Ministerio Ciencia y Tecnologia for financial support through the REN2002-04337-C02-01/CLI project. J. M. Delgado is grateful to the Generalitat Valenciana for the FPI grant.