

**USE OF PASSIVE SAMPLERS TO ASSESS HEALTH EFFECTS
CAUSED BY TROPOSPHERIC OZONE IN LA PLANA DE
CASTELLON (SPAIN)**

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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 health of the population of the area. Measurement campaigns have been made in summer 2001 as well as in later winter and first spring 2002 with sampling periods of one week. The area of study has been divided into twenty sampling points and measurements have been made with Ogawa® passive samplers. A relationship between measured ozone levels by means of passive samplers and averaged 1-hour and 8-hours continuous ozone levels measured by means of the UV-photometric analyzers have been established with a correlation coefficient of 0.792 and 0.736 respectively. In both sampling campaigns, summer 2001 and winter 2002, exceeds of some reference ozone levels in daily, 8-hours and 1-hours have been studied to assess health effect of the population in the area of study. There are several points during determined weeks that exceed some reference values and guidelines that epidemiological studies relate with health effects. Nevertheless, the ozone levels recorded in “La Plana de Castellon” are not high enough to cause acute and severe health effects to the population of the area. 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.