

**PHYSIOLOGICAL, BIOCHEMICAL AND MICROMORPHOLOGICAL CHANGES IN
EPICUTICULAR WAX IN LEAVES OF CITRUS
(CITRUS AURANTIUM L.) INDUCED BY OZONE IN EGYPT**

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Macro- and micromorphological changes in epicuticular wax, the peroxidase activity, chlorophyll contents, photosynthetic rates (A), stomatal conductance (gs) and transpirational rates were investigated in the leaves of citrus plants (*Citrus aurantium* L.) grown in rural area in northern Egypt characterised by high levels of ambient ozone (O₃). Exposure to ambient O₃ caused an increased rates of weathering of epicuticular wax, peroxidase activity, stomatal conductance and transpirational rate by 43, 40, 37 and 39%, respectively, while photosynthetic rates and chlorophyll contents were decreased by 35 and 26%, respectively.

Keywords: ambient ozone (O₃), Egypt, citrus leaves, epicuticular wax, photosynthetic rates, peroxidase activity.