

DECOLORIZATION OF AGRO-INDUSTRIAL WASTEWATERS USING ELECTROCOAGULATION**K.P. Papadopoulos¹, A.K. Benekos¹, A.G. Tekerlekopoulou², D.V. Vayenas^{1,3,*}**¹Department of Chemical Engineering, University of Patras, Rio, GR-26504 Patras, Greece²Department of Environmental and Natural Resources Management,
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GR-26504 Patras, Greece(*dvayenas@upatras.gr)**ABSTRACT**

Greece, although not over-industrialized, is facing issues connected to pollution of its water resources, as conventional wastewater treatment methods often prove ineffective in terms of removing pollutants, such as pigments. Therefore, the need of developing efficient, modern anti-pollution techniques for the preservation of a viable environment is urgent as ever. Electrocoagulation (EC) is one of these widely studied, promising methods. In this study EC is investigated as an alternative method for the decolorization of table olive processing wastewaters (TOPWs) and real printing ink wastewater (PIW). In all experiments, complete decolorization of two types of agro-industrial wastewater was achieved. According to the experimental data, aluminum electrodes were more efficient in reducing color than iron electrodes. Concluding, EC can be a viable and realistic choice for agro-industrial wastewater decolorization.