



Emerging Pollutants: Protecting Water Quality for the Health of People and the Environment

**Photodegradation of diethyl phthalate, butylparaben, and bisphenol A using
UV/H₂O₂ process: response surface analysis and toxicity evaluation**

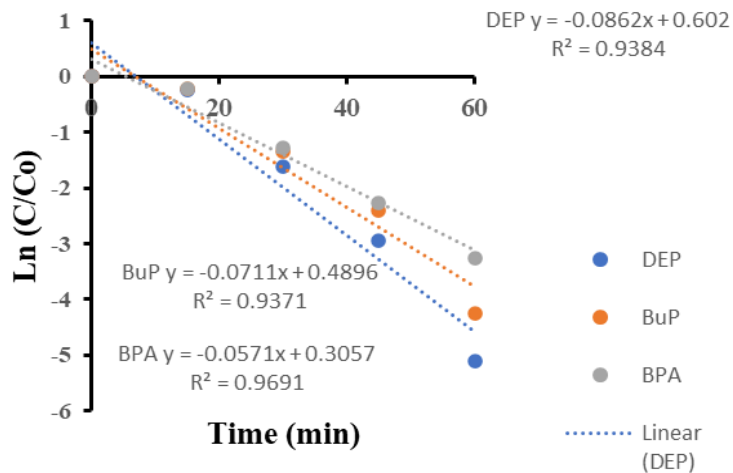
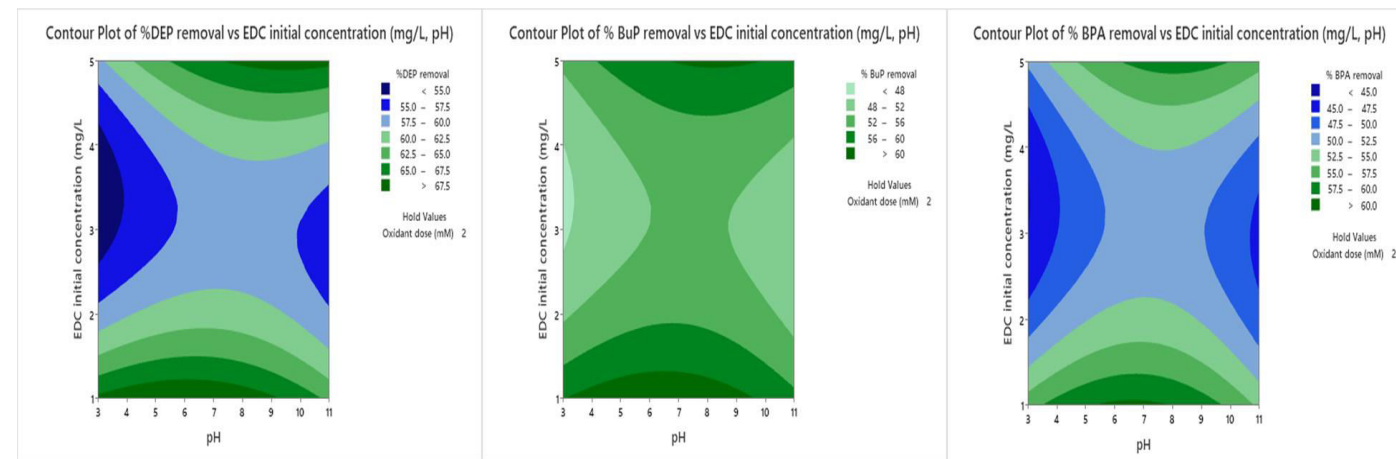
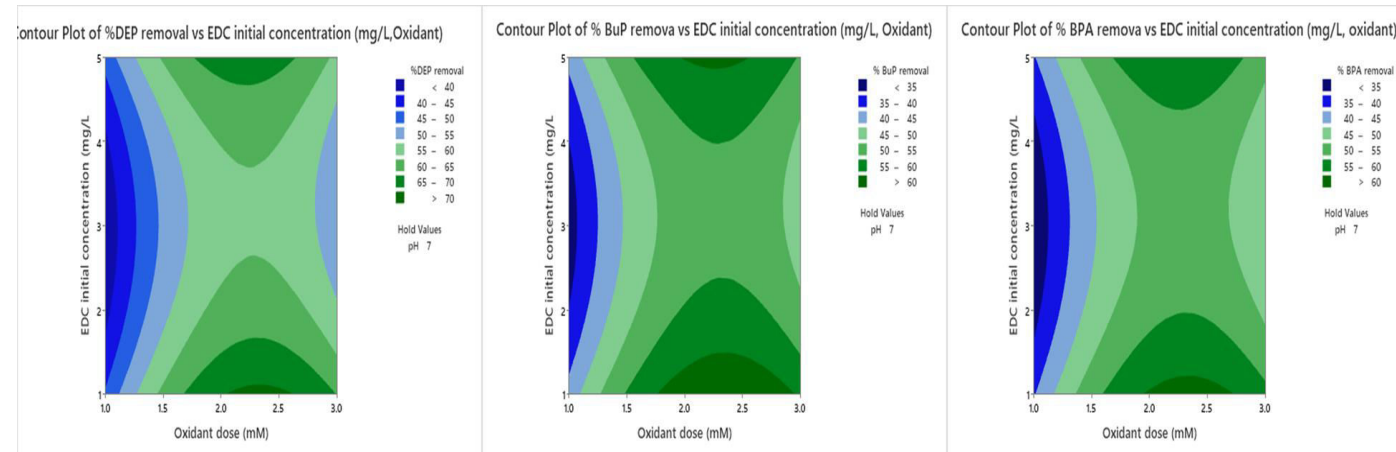
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Experimental result and its validation

AOP studied	Variables
UV/H ₂ O ₂	EDC Conc.: 1 and 5 mg/L pH: 3,7,9,11 Oxidants dosage: 1.0, 1.5, 2.0, 2.5, and 3.0 mM



Toxicity Evaluation

Studies performed on *Daphnia magna*

Cultured *Daphnia magna*

Acute studies: 48 hrs

Acute toxicity tests being performed as per ABNT. NBR 12713: Aquatic Ecotoxicology – Acute Toxicity – Method of *Daphnia* spp assay (Crustacea, Cladocera). Rio de Janeiro, 2016

$EC_{50} = 67.61\%$ at **Conc.** = 1 mg/L

$EC_{50} = 50.18\%$ at **Conc.** = 5 mg/L

