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Photodegradation of ethyl paraben using simulated solar radiation and Ag_3PO_4 photocatalyst

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Highlights

- Ag_3PO_4 with a bandgap of 2.4 eV is a photocatalyst highly responsive to visible.
- Factorial design was used to assess important factors for ethyl paraben degradation.
- Ethyl paraben and Ag_3PO_4 concentration, time, water matrix are significant factors.
- Dealkylated and decarboxylated transformation by-products have been identified.
- All parabens are slightly estrogenic compared to estradiol.