

Degradation of Aqueous 4-Chloroaniline by Ozonolysis and Combined γ -Rays-Ozone Processing

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The decomposition of 4-chloroaniline (4-ClA), used as a model for water pollutants, was studied by ozonolysis as well as by γ -rays in the presence of ozone under comparable conditions. The degradation process was followed by absorption spectroscopy and by HPLC-method as well. Depending on the ozone concentration (mg O₃/min) introduced into the aqueous solution the substrate is decomposed to a mixture of carboxylic acids, which can be entirely degraded by prolonged treatment.

The combined processing of 4-ClA by γ -irradiation in the presence of ozone proved to lead even to more efficient degradation of the substrate. Some primary reaction steps are briefly discussed.