Title: **Removal of bisphenols by UV/H_2O_2: degradation, photolysis and kinetics studies.**

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The presence of emerging contaminants in wastewater has increased in the recent years. Studies in wastewater shown that the emerging contaminants behave like endocrine disruptors which are harmful to human health. One of the endocrine disruptors, with the highest presence in the wastewater is bisphenol A (BPA). Bisphenol A (BPA) is a chemical compound used to make plastics and resins. These plastics is mainly used to make packaging that come into contact with food and beverages. Several studies have been performed on this compounds and it has been found to be harmful to the environment and to human health.

Although there are countries that still use it, BPA is prohibited due to its toxicity and because of it, BPA has been replaced by bisphenol F (BPF) and bisphenol S (BPS), components that have similar composition.

In this work has been determinated the kinetic constants of bisphenol F (BPF) and bisphenol S (BPS) with the advanced oxidation process (AOP) of UV/H2O2, thought global degradation experiment and photolysis at different pHs. The kinetics of these compounds will be helpful to know what is their degradation in order to treat them as contaminants.

With the results obtained we can see that the kinetic constants of BPF and BPS are similar to each other and degrade the compound with these AOPs. It has also been verified that the pHs used do not affect these kinetic constants.The presence of emerging contaminants in wastewater has increased in the recent years. Studies in wastewater shown that the emerging contaminants behave like endocrine disruptors. The endocrine disruptors are harmful to human health. One of the endocrine disruptors, with the highest presence is bisphenol A (BPA). Bisphenol A (BPA) is a chemical compound used to make plastics and resins. These plastics is mainly used to make packaging that come into contact with food and drink. Several studies have been performed on this compounds, and it has been found to be harmful to the environment and to human health. It is prohibited due to its toxicity, although there are countries that still use it. Because of its prohibition, BPA has been replaced by bisphenol F (BPF) and bisphenol S (BPS) of similar composition.

In this work has been determinated the kinetic constants of bisphenol F (BPF) and bisphenol S (BPS) with the advanced oxidation process (AOP) of UV/H2O2, thought

global experiment and photolysis at different pHs. The kinetics of these compounds will help to know what is their degradation in order to treat them as contaminants.

With the results obtained we can see that the kinetic constants of BPF and BPS are similar to each other and degrade the compound with these AOPs. It has also been verified that the pHs used do not affect these kinetic constants.