

Title: **Characterization of micro and meso porous materials for the elimination of organic pollutants.**

Student: Alda Geijo Lopez

Date: September 2020

Supervisor/s: Dr. Javier Fernández Gonzalez
Departament of Materials Science and Physical Chemistry

The initial idea of this work was the processing and characterization of activated carbon obtained from rice husks. The comparison of the results obtained from activated carbon with a commercial activated carbon had also been considered. Due to the exceptionality experienced, both in terms of time and access to equipment, the work has had to be reduced in both samples and tests performed.

The characterization has been carried out on samples of activated carbon obtained with different heat treatments, rice husks, for its characterization different tests have been performed: analysis: moisture, volatile components, ash, electron microscopy scanning (SEM) and particle size analyzer by laser diffraction. This characterization has been carried out partly using the regulations of the European Council of Federations of Chemical Manufacturers, and on the other hand the characterization carried out in different articles related to the subject.

The aim is to ensure that activated charcoal, derived from rice husks, can be used to adsorb organic pollutants to wastewater.

The characterization of activated carbon, from rice husks, shows that it follows the regulations for its possible marketing, as tests of moisture, volatile components and ash give results within the limits of the regulations.