

## **Abstract**

Lignosulphonates and fermentable sugars are the main components of spent sulphite liquors produced in acid sulphite pulping. In spite of different methods have been used for spent liquor fractionation such as precipitation or vaporization; membrane technology allows the separation of these components from the SSL due to their different size molecular weight, offering great advantages with regards to the traditionally methods (less energy consumption, high selective separation, and many others). In the present study, ceramic membranes with different cut-offs (15, 5 and 1 kDa) were used to achieve the sugar purification and the LS concentration. The membranes were evaluated according to their efficacy and efficiency properties. Different series system were tested in order to improve the aptitudes of a singular membrane. The system with the three membranes in series (15, 5 and 1 kDa respectively) obtained the most purified permeate stream, referred to the sugar content. Also, a characterisation of the LS contained in the different streams produced in this system was carried out in order to know in a more precise manner the valorisation potential of these components by means of biorefinery processes.

*Keywords: ultrafiltration, fermentable sugars, lignosulphonates, spent sulphite liquor.*