**Polyphenol Recovery from the Rose Processing Wastewater**

Evrim Celik Madenli, Murat Kaleli, Mehmet Kitis, Dilara Kesiktas, Havva Elif Lapa, Esra Sen

Rose oil is mainly produced by distillation. After distillation a relatively high temperature waste (rose processing wastewater) remains consisting of distillation water together with the rose flower wastes, rich in non-volatile polyphenols. In this study, polyphenol recovery from the wastewater generated after rose oil production with ceramic membranes was investigated. Three different ceramic membranes with pore sizes of 1 kDa, 15 kDa and 150 kDda were investifgated. Rose processing wastewater filtration was conducted with all membranes. At the end of the filtration polyphenol recovery from membrane surface was done by using ethanol. Polyphenols were analysed by using high-performance liquid chromatography (HPLC) in inflow, permate, and recovery lines of the filtration. The results showed that the ceramic membranes have the potential to provide both good performance in rose processing wastewater treatment and polyphenol recovery from the membrane surface.

This research was supported by a grant (120Y135) from Scientific and Technological Research. Council of Turkey, through the Support Program for Scientific and Technological Research Projects, partially supported by a grant (FBY-2018-5377/SDÜ3785) from Süleyman Demirel University.