Physiological Activity of *Petroselinum crispum* Extract and Enhancement of Skin Permeation Using Polymer Micelles and Cell Penetration Peptide

안규민, 박수인, 김민기, 허수현, 신문삼†
을지대학교

The purpose of this study was to evaluate the physiological activity of *Petroselinum crispum* and to enhance skin absorption using polymer micelles and cell permeation peptides. The total polyphenol content of antioxidant method was 121.68±2.49 mg/g for *Petroselinum crispum* ethanol extract and 72.42±1.52 mg/g for *Petroselinum crispum* hydrothemal extract. The ABTS radical scavenging ability of the *Petroselinum crispum* ethanol extract at the concentration of 800 mg/L was 91.08±0.14%, better than that of the hydrothermal extract (69.63±0.55%). Elastase inhibitory results also showed a concentration-dependent result and the highest elastase inhibition rate of 99.99±1.54% at 2,000 mg/L of *Petroselinum crispum* ethanol extract. To improve poor solubility problems and skin absorption, PCL-PEG polymer micelles with 40.01 nm particle size containing *Petroselinum crispum* ethanol extract and 1% cell permeation peptide (6 arginine, R6) were successfully prepared, excellent transdermal absorption could be obtained.