

Application of Ionic Liquids as Additives in Extraction of Astaxanthin from Portunus Trituberculatus

이유진, 이유리, 노경호*
인하대학교
(rowkho@inha.ac.kr*)

Astaxanthin is one of the carotenoid with powerful antioxidant. This work reported extraction of astaxanthin from portunus trituberculatus by ionic liquids. The application of ionic liquids based on extraction methods such as ultrasonic-assisted extraction, dipping extraction and heat reflux extraction, were investigated for extracting astaxanthin and heat reflux extraction exhibited higher efficiency. The heat reflux extraction parameters including temperature, time, solvent to raw material, extraction solvent were optimized. For the increase of the extraction yield, ionic liquids were used as additives in the extraction. As a result, 45.81 $\mu\text{g/g}$ of astaxanthin was extracted from portunus trituberculatus waste. Moreover, good linearity, reproducibility, and recovery were observed in the optimization experiments.

Keywords: Astaxanthin, Portunus trituberculatus, Ionic liquids, High performance liquid chromatography