

## Isolation of Krill Phospholipids and Determination of Their Polyunsaturated Fatty Acids

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As with fish, the Antarctic krill is a rich source of the long-chain Omega-3 fatty acids EPA and DHA. However unlike fish oil, the EPA and DHA of Krill Oil are in the form of a Phospholipids giving it new properties and making it potentially more potent. Several methods were compared for recovery and purification of mixtures of phospholipids from krill. An improved procedure was developed to extract the lipids from krill with ethanol and hexane. In this study our objective was to optimize and improve existing methods to isolate an enriched phospholipid fraction from dry krill using selective supercritical fluid extraction (SFE). A phospholipid-rich fraction was successfully extracted with a unique two-step process, consisting of a first step with CO<sub>2</sub> and a second step with ethanol as eluent. The phospholipids purified were analyzed by HPLC with silicic acid column. The amounts of unsaturated fatty acids were estimated from spectrophotometric data and iodine values. The yield was estimated to be approximately 8.06% of dried krill.