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### (54) BIOEFFECTIVE KRILL OIL COMPOSITIONS

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(52) **U.S. Cl.** ...... **424/522**; 514/121; 514/78; 514/114;

#### (57)ABSTRACT

This invention discloses new krill oil compositions characterized by having high amounts of phospholipids, astaxanthin esters and/or omega-3 contents. The krill oils are obtained from krill meal using supercritical fluid extraction in a two stage process. Stage 1 removes the neutral lipid by extracting with neat supercritical CO<sub>2</sub> or CO<sub>2</sub> plus approximately 5% of a co-solvent. Stage 2 extracts the actual krill oils by using supercritical CO<sub>2</sub> in combination with approximately 20% ethanol. The krill oil materials obtained are compared with commercially available krill oil and found to be more bioeffective in a number of areas such as anti-inflammation, antioxidant effects, improving insulin resistances and improving blood lipid profile.



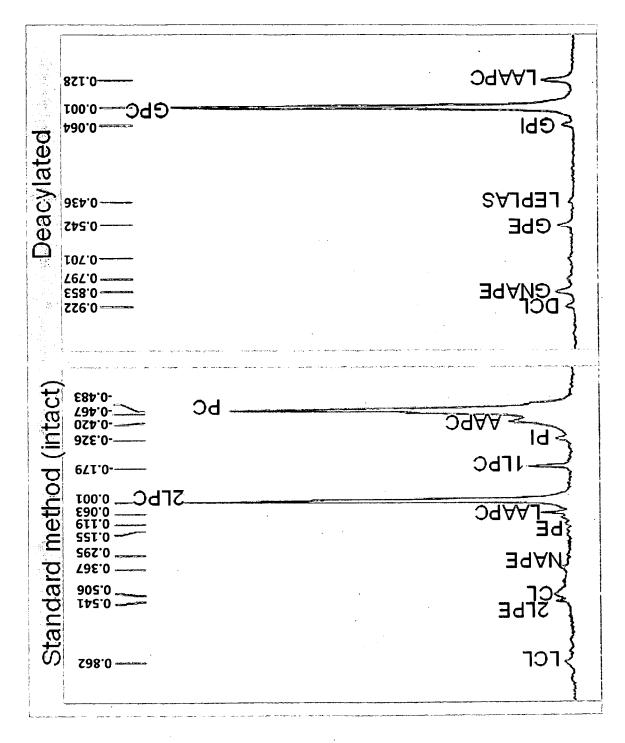
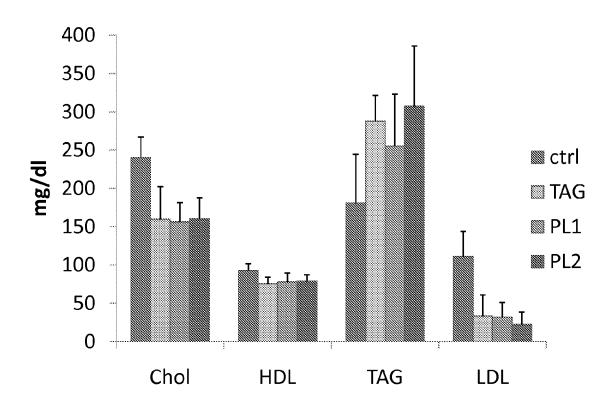


FIGURE 1

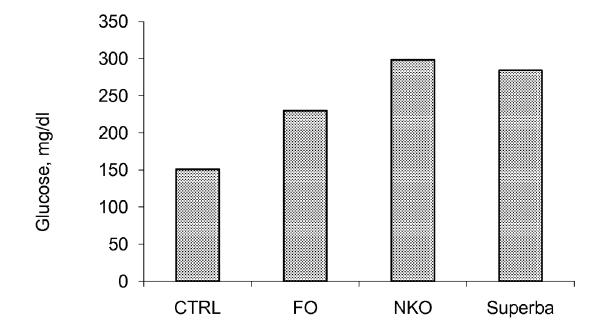


## FIGURE 2



## FIGURE 3

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# 3.50 3.00 2.50 Insulin, microU/L 2.00 1.50 1.00 0.50 0.00 CTRL FO NKO Superba



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