

Phospholipids in Mediterranean Cephalopods

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Polar lipids of the cephalopods *Eledone moschata*, *Sepia officinalis* and *Todarodes sagittatus* mantle, represent 50.5%, 66.1% and 74.2% of wet tissue respectively. On the other hand the polar lipids of these three species of cephalopods constitute of 80.8%, 94.8% and 93.7% of phospholipids, respectively. The main phospholipids identified were phosphatidylcholine (52.2, 51.3 and 58.4% of total phospholipids respectively in the above mentioned species), phosphatidylethanolamine (18.1, 19.7 and 23.9%), sphingomyelin (10.7, 15.2 and 6.7%), lyso-phosphatidylcholine (3.1, 3.8 and 1.8%) and the unusual lipid ceramide aminoethylphosphonic acid (15.9, 10 and 9.2%).

The 56.8% of phosphatidylcholine in *Eledone moschata*, the 46% in *Sepia officinalis* and the 74.1% in *Todarodes sagittatus* refer to the structure of 1,2-diacyl-glycerocholine and the remaining percentage refer to the structure of 1-*o*-alkyl-2-acyl-glycerocholine or 1-*o*-alkyl-1-enyl-2-acyl-glycerocholine.

The 87.2% of phosphatidylethanolamine in *Eledone moschata*, the 81% in *Sepia officinalis* and the 90.7% in *Todarodes sagittatus* refer to the structure of 1,2-diacyl-glyceroethanolamine and the remaining percentage refer to the structure of 1-*o*-alkyl-2-acyl-glyceroethanolamine or 1-*o*-alkyl-1-enyl-2-acyl-glyceroethanolamine.

The major saturated fatty acids in phosphatidylcholine and phosphatidylethanolamine were C16:0 (30.3–67.5% and 23.2–54.5%) and C18:0 (3.6–17% and 15.4–28%), respectively, while the major unsaturated fatty acids in these lipids were C18:1n-9, n-7 (1.0–7.3% and 5.3–10.5%), C20:5n-3 (1.5–9.8% and 4.5–15.8%) and C22:6n-3 (12.5–42.0% and 7.0–11.3%), respectively.