

**ANTIOXIDANT ACTIVITIES AND BIOCHEMICAL COMPONENTS
OF THREE MARINE MACROALGAE (*Padina pavonica* (Linnaeus)
Thivy,1960, *Ulva lactuca* Linnaeus, 1753 and *Taonia atomaria*
(Woodward) J.Agardh 1848) FROM THE MEDITERRANEAN
COAST OF ANTALYA, TURKEY**

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Objective: One of the most important living sources of sea is macroalgae. Nutrition, agriculture, medicine, pharmacy, cosmetics and various industrial branches benefit from macroalgae. The aim of this study was to determine and compare antioxidant activities and fatty acid (FA) composition of *U. lactuca*, *T. atomaria* and *P. pavonica*.

Method: Marine algae are collected from several rocky shores by hand in April 2014 from Lara (Antalya, Turkey). Washed to remove epiphytes, sediment and other organic matter several times with sea water. These algae moved to the laboratory in bags. Then, washed again with distilled water. The dried material was powdered (particle size <910 µm) and kept in the dark, in a desiccator, until fatty acid extraction. Fatty acid composition was analyzed by gas chromatography. Vitamin, phenolic profile and sterol content were analyzed by HPLC. The total phenolic content was determined with the Folin-Ciocalteu method.

Results and Discussion: Green algae *U. lactuca*, brown algae *T. atomaria* and *P. pavonica* are widespread in the Mediterranean sea. There is limited information about antioxidant activities and fatty acid composition of these species from the Mediterranean sea. Fatty acid composition of algal lipids varies widely with species, habitat, light, salinity, pollution and environmental conditions but in most studies palmitic acid (C16:0) is predominant. Palmitic acid was the major fatty acid in all species tested. Palmitic acid (C16:0) as the most abundant saturated fatty acid (21-41 %). The green algae was rich in palmitic acid (C16:0) (41,68%). Monounsaturated fatty acids (MUFAs) were major components (39-42 %). The total MUFA content for *U. lactuca* was 40.63 %, *P. pavonica* 42.89 % and for *T. atomaria* 38.81 %. Oleic acid (C18:1 n-9) was the most abundant MUFA in all species analyzed. Important long-chain polyunsaturated fatty acids