

عنوان مقاله:

Proximate composition and fatty acids profiles of Artemia cysts, and nauplii from different geographical regions of Iran

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خلاصه مقاله:

Artemia has been widely used in aquaculture as a suitable live food. The presence of highly unsaturated fatty acids is a key factor that determines the nutritional value and marketing of Artemia for shrimp, marine larvae, sturgeon and ornamental fish industries. To determine the variation in nutritional content in cysts, decapsulated cysts and nauplii of Artemia from three different biotopes of Iran, were tested for their protein, lipid, energy, and fatty acid profiles, particularly essential fatty acids. The cysts collected from Urmia, Maharlou and Meighan lakes, were rinsed, processed, decapsulated, hatched and then analyzed for proximate and fatty acid composition using standard methods. Statistical comparisons of the results revealed significant differences not only in proximate composition but also in fatty acid contents ($p < 0.05$). The highest mean (\pm SD) level of protein (60.5 ± 3.3 %), lipid (18.6 ± 1.1 %) and energy contents (5448.3 ± 10.4 Kcal/kg) were observed in Instar I nauplii hatched from Urmia Lake cysts, Instar I nauplii hatched from Maharlou Lake cyst and Instar I nauplii hatched from Urmia Lake decapsulated cyst, respectively. The highest content of DHA (0.78 mg/g DW) was observed in nauplii of cysts from Urmia Lake whereas, it was around zero in other samples. The highest level of EPA (24.24 mg/g DW) was measured in nauplii from Maharlou Lake decapsulated cysts and the lowest (0.24 mg/g DW) was observed in Urmia lake cysts. The results revealed that the nauplii from decapsulated cysts of Maharlou Lake Artemia contained significantly higher levels of EPA and n-3 HUFA compared to others. Therefore, it is recommended to use it in aquatic larviculture.

کلمات کلیدی:

Artemia, cyst, Decapsulated cyst, Nauplii, Nutritional value, Fatty Acid Profile

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