



α -TOCOPHEROL, VITAMIN A AND CAROTENOID CONTENT DURING GILTHEAD SEABREAM (*Sparus aurata*) LARVAL DEVELOPMENT

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α -tocopherol, vitamin A and carotenoids were studied in eggs and larvae of gilthead seabream (*Sparus aurata*) up to day thirty after hatching. The vitamin and carotenoid content of the enriched rotifers and *Artemia* was also analysed. α -tocopherol and total vitamin A showed levels equal or above the standard recommendations for warm-water *Percoidea* marine fish. The keto-carotenoids astaxanthin and canthaxanthin were found in the enriched rotifers. Vitamin A was not detected in *Artemia* nauplii but α -tocopherol and canthaxanthin were found. Free retinoids were not detected in any of the live preys. Both, total vitamin A and α -tocopherol in individual larvae showed an initial decrease from hatching to the start of exogenous feeding. Uptake of both vitamins by the larvae was demonstrated as the content of α -tocopherol and total vitamin A per larvae increased after the onset of exogenous feeding. However, the content of total vitamin A dropped by day 20 after hatching which coincided with the gradual change from enriched rotifers to *Artemia* nauplii. Retinal and free retinol increased gradually during larval development although they were not detected at egg stage. Astaxanthin and lutein were detected in trace amounts in the gilthead seabream eggs. Some carotenoids were found in the larvae between day 20 and 30 after hatching. The results of this study suggest a variation in vitamin A and E during larval development from the onset of feeding dependent on the sort of dietary supply used.