RETINOL AND TOCOPHEROLS LEVELS IN WHITE EGGS FROM CHICKEN FED WITH ANNATTO (*Bixa orellana L.*) SEEDS

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Of laying hens reared in poultry houses 72.8% mainly produce white eggs. The use of annatto (*Bixa orellana* L.) seeds in their diet may change the final quality of the egg composition by introducing different nutrients as geranylgeraniol, tocotrienols and carotenoids. These compounds can contribute to increase rate of vitamins and egg yolk colour, being beneficial to health. Thus, the objective of this study was to evaluate the retinol and tocopherols levels in eggs obtained after a period of 7, 28 and 56 days from laying hens fed with 0%, 0.45% and 0.90% annatto seeds and compare to the commercial ones. After 56 days, the mean levels determined were 256±21 μg 100g⁻¹ for retinol, 0.29±0.17 mg 100g⁻¹ for α-tocopherol and 0.07±0.01 mg 100g⁻¹ for δ-tocopherol. On the other hand, the mean values found in egg yolks commercially available (3 brands) were 291±88 μg 100g⁻¹ for retinol, 1.24±0.45 mg 100g⁻¹ for γ-tocopherol and 0.5±0.3 mg 100g⁻¹ for δ-tocopherol. It is possible to observe a minor reduction in retinol concentrations compared with the tocopherols that reached 2.5% of the initial concentration.