

## LIPID OXIDATION IN EGGS FROM HENS WITH 46 WEEKS CREATED IN AN ORGANIC AND CONVENTIONAL SYSTEM

### OXIDAÇÃO LIPÍDICA EM OVOS DE POEDEIRAS COM 46 SEMANAS CRIADAS EM SISTEMA ORGÂNICO E CONVENCIONAL

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The egg is known as one of the most complete foods because it has a rich source of nutrients, with an excellent balance of fats, carbohydrates, minerals and vitamins, and especially proteins, being the second best source of protein available for human consumption, second only into breast milk. However, it is an ideal for growth of pathogenic microorganisms and because it is a product of animal origin, such as meat and its derivatives means, is a highly perishable food and can quickly lose its quality. The eggs are important constituents of the diet, may help to improve the diet of the poor. In shell eggs are considered resistant to lipid oxidation, but studies have shown that commercial egg yolk lipids undergo oxidation during storage. Organic eggs are produced by hens receiving a diet 100% organic, grown in conditions that value their well-being and natural behavior, with some prohibited practices such as beak trimming and confinement in cages. The experiment was conducted to evaluate the effect of storage time on lipid oxidation of egg yolks organic and conventional eggs from hens Isa Brown, collected at 46 weeks of age. Eggs were collected and stored in plastic trays under ambient temperature conditions (25°C) using 100 eggs for analysis of the process of TBARS with ten repetitions for different storage periods, corresponding to 0, 7, 14, 21 and 28 days (Table 1). The results obtained were subjected to analysis of variance using the Statistical Package SISVAR and means were compared by Tukey test at 5% significance.

Table 1. Values obtained for the analysis of TBARS in different periods of storage systems creations

Systems	Storage time (days)				
	0	7	14	21	28
Organic	0.2427 a	0.2666 a	0.2574 a	0.2449 a	0.3406 a
Conventional	0.2550 a	0.2598 a	0.3075 a	0.2372 b	0.3703 a

Means followed by different letters in column differ each other ( $P > 0.05$ ) by the Tukey test.

No significant statistical differences ( $P < 0.05$ ) about the TBARS analysis for both types of systems designs were observed. TBARS values increased with the passage of time and only at 21 days there was no difference in the systems ( $P > 0.05$ ), and only after 28 days there was a higher oxidation in both systems. We conclude that organic eggs and conventional eggs may be stored at room temperature up to 21 days without significant loss in quality.

Keywords: egg quality, storage time, TBARS.

Acknowledgments: Korin for donating eggs.