

## MEDIUM-CHAIN FATTY ACIDS, EMULSIFIERS AND PHYTOBIOTIC FEED ADDITIVES INFLUENCE ON LAYING HEN'S EGGS' SENSORIC QUALITY

*Jolita Klementavičiūtė<sup>1</sup>, Romas Gružasuskas<sup>1</sup>, Aldona Mieželiene<sup>2</sup>, Gitana Alenčikienė<sup>2</sup>, Guoda Stanytė<sup>1</sup>, Ieva Kudlinskienė<sup>1</sup>, Vilija Buckiunienė<sup>1</sup>*

*<sup>1</sup>Institute of Animal Rearing Technologies, Faculty of Animal Husbandry Technology  
Lithuanian University of Health Sciences, Veterinary Academy, Kaunas, Lithuania  
Tilžės 18, LT-47181, Kaunas, Lithuania; e-mail: jolita.klementaviciute@lsmuni.lt*

*<sup>2</sup>Food Institute of Kaunas University of Technology; Taikos av. 92, LT-51180 Kaunas; Lithuania*

**Abstract.** The aim of this research was to evaluate how medium-chain fatty acids, emulsifiers and phytobiotic additives in feeds influence sensory quality of laying hen's eggs' – fresh and retained for 28 days. Laying hens were fed standard compound feed which was additionally interspersed with mix of medium-chain fatty acids (MCFA), besides that, feeds were additionally interspersed with emulsifiers (Lipidol, Lysoforte Booster) and phytobiotic feed additive (Sangrovit Extra). Eggs were supplied for sensory analysis fresh and in the end of it's realization (after 28 days of storage at 4°C). Sensory traits evaluated were intensity of egg yolk and albumen attributes, such as overall odor, non typical odor, hardness, taste of yolk or albumen, non-typical taste, yolk color intensity, granularity of yolk. Medium-chain fatty acids, emulsifiers and phytobiotic additives in feeds did not affect the sensory properties of the fresh and stored for 28 days eggs. Visual evaluation of eggs during sensory analysis did not reveal any differences in albumen color homogeneity or yolk color intensity. Selected concentration of feed additives did not alter albumen or yolk taste, odor, or texture. Therefore, the proposed feed additives supplements could be used for laying hens diet as they do not decrease product sensory quality.

**Keywords:** medium-chain fatty acids, emulsifiers', feed additives, eggs sensory analysis