



3- Salwa S. Pasha and Nagat H. Soliman, (2022). "Efficacy of essential oils as antiseptics on the productive characteristics of the mulberry silkworm *Bombyx mori* L." European Journal of Biological Research, 12(1): 37-45.
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ABSTRACT: The study aimed to test the efficacy of three essential oils (basil *Ocimum basilicum* L., lemon *Citrus limon* (L.) Osbeck, and thyme *Thymus vulgaris* L.) as disinfectants, including their positive and negative effects, on the biological and productive parameters of the silkworm *Bombyx mori*. Biological parameters: basil oil treatment at 2000 ppm the highest significant 5th instar larval weight and pupal weight were 2.226 g and 0.787 g. In addition, at the same concentration, recorded the lowest significant mortality percentage and 5th instar larval duration, were 9.4 day and 5.09 % respectively. On the other hand, lemon and thyme oils at 4000 ppm come in the second place the same parameters, compared to the control and the chemical disinfectant. While it is equal to the concentration of 8000 ppm for the oils tested in all biological parameters with the control and chemical disinfectant. Economical parameters: basil oil at 2000 ppm and lemon and thyme oils at 4000 ppm had the highest significance for cocoon weights, cocoon shell weight, and silk productivity, which were 1.203 g, 0.220 g, 2.34 cg for basil oil, 1.139 g, 0.210 g, 2.367 cg for lemon oil and 1.265 g, 0.216 g, 2.397 cg for thyme oil, compared with control and disinfectant chemical groups (0.993 g, 0.157 g, 1.49 cg and 0.991 g, 0.160 g, 1.68 cg, respectively). The highest significant difference of cocoon percentages was seen with basil oil at 2000 ppm, compared to the other treatments.

Keywords: Antiseptic; *Bombyx mori*; Nutritional enhancers; Essential oils.