

Acute toxicity studies of extracts from *Lavandula angustifolia mill.*

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Introduction. Fine lavender (*Lavandula angustifolia* Mill., LA) is a valuable plant, broadly cultivated for essential oil production. LA extracts display a broad spectrum of pharmacological activities, including antioxidant, sedative, anti-inflammatory and antimicrobial properties. The use of LA extracts as food additives requires a thorough investigation of their toxicity profile. We report in the current communication preclinical acute toxicity studies of a LA ethanolic extract.

Material și methods. Wistar rats (n=42) of both sexes, with a body weight of 200 - 400 g, aged approximately 3 months, were used for the acute toxicity study. Acute toxicity was modeled by intragastric administration of LA extract solution by gavage to outbred rats. The LA extract was administered in doses of: control group, group I - 500 mg/kg; II - 1000 mg/kg; III - 1500 mg/kg; IV - 3000 mg/kg; V - 4000mg/kg; VI – 5000 mg/kg. After 14 days, the animals were euthanized and blood was collected with the study of biochemical indices (total protein, albumin, urea, creatinine, AST, ALT).

Results. Acute toxicity studies demonstrated that after internal administration of LA extract to rats in doses of 500 mg/kg, 1000 mg/kg; 1500 mg/kg, 3000 mg/kg, 4000 mg/kg, 5000 mg/kg no death of animals. LA extract was established as a relatively harmless biologically active substance (LD50 being >5000 mg/kg). The harmlessness of the LA extract was confirmed by the study of the peripheral blood picture in the animals of the group treated with the LA extract with the administrable dose of 500 mg/kg and 5000 mg/kg in which the level of biochemical indices did not change.

Conclusion. LA extracts in doses of 500 mg/kg - 5000 mg/kg do not produce changes in biochemical parameters and can be considered harmless.

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