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Evaluation of acute, sub-acute and skin irritation toxicity of essential oil from *Thymus Schimper* in Ankober, North Shewa, Debre Berhan, Ethiopia

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Background: The extensive uses of plants as medicines have been reported. However, the use of herbal products should be based on scientific origin; otherwise they would be useless and unsafe. The present study aims to evaluate the toxicity profile of oil of *Thymus schimper*.

Methods: For acute and sub-acute toxicity study, albino mice of both sexes were used. Skin irritation test was conducted on wistar rats. For the acute toxicity study, the essential oil was tested at three dose levels (1500, 1750 and 2000 mg/kg). A total of 10 mice were used for each dose level. Sub-acute toxicity study was done at a dose of 1000 mg/kg with five mice. For the skin irritation test, the essential oil was tested at two concentrations of 1% and 5% with 10 rats for both concentrations.

Results: The results indicated that *Thymus schimper* oil did not cause any mortality upto the limit doses of 2000 mg/kg. The essential oil did not cause significant weight change ($p>0.05$). The plant also did not cause significant increase in serum enzyme level of the study mice ($p>0.05$). The histopathological examination on liver and kidney showed that plant did not cause major organ damage. Ointment prepared from *T. schimper* oil did not cause any abnormal skin reaction up on follow up for 14 days post treatment.

Conclusion: It is concluded that the tested medicinal plant is safe as per animal study.