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## OPTIMIZE ANTI-INFLAMMATORY EFFECTIVITIES OF EXTRACT *KAEMPFERIA GALANGA L* IN OINTMENT

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### ABSTRACT

*Kaempferia galanga L* contains ethyl p-methoxycinnamate. The purpose of this investigation was to develop and optimize anti-inflammatory effect of *Kaempferia galanga L* in ointment dosage form. Investigation of anti-inflammatory from three ointments containing 1%, 2% and 3% of *Kaempferia galanga L* extract, with petrolatum as negative control, and *Kaempferia galanga L* extract as positive controls on rats Sparque Dawley have been carried out. The *Kaempferia galanga L* extract were made by maceration using 96% ethanol and evaporated at 60°C, the result were evaluated and tested for anti-inflammatory effect on rats that induced with 0.05 ml carrageenan 1%w/v intra-planar, one hour before the test initiation. The ointments were made by fusion methods using white petrolatum as bases. The ointment products were evaluated and tested their effectiveness using 18 rats (three rats per group). The result showed that *Kaempferia galanga L* extract were brown and viscous solution, *Kaempferia galanga L* odor, contains of ethyl cinnamate, alkaloids, volatile oils, saponins, tannins, flavonoids, sterols, and have anti-inflammatory effect of (95.17±0.08)% in two hours. All of *Kaempferia galanga L* ointment formulas have white to yellowish colors, *Kaempferia galanga L* odor, homogeneous, with spreadabilities from (1508.97 ±78.86) mm<sup>2</sup> to (1975.87±152.86) mm<sup>2</sup>, and viscosity of 10.000 cps to 340.000 cps. In two hour, one of the formulas containing 1 % *Kaempferia galanga L* had anti-inflammatory effect (85.45±0.06) %, and two other formula had (100±0.17) %.

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