

**Abstracts (Poster Presentation)**

## Evaluation of Anti-inflammatory Activity on Rat Paw Edema and Rat Ear Edema Models and Chemical Composition of Kheaw-Hom Remedy

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### Abstract

**Introduction:** Kheaw-Hom (KH), a Thai traditional remedy, is clinically used to treat fever and inflammation in children with both oral and topical medications. However, there is no scientific report on anti-inflammatory activity in animal models.

**Objectives:** To investigate the anti-inflammatory activity on edema model in rats and the chemical composition of KH remedy.

**Methods:** Kheaw-Hom powder (KHP) and the ethanolic extract (KHE) at the doses of 100, 200, and 400 mg/kg were performed using carrageenan-induced rat paw edema model. KHP and KHE at concentrations of 0.5%, 1%, and 2% w/v were performed using ethyl phenylpropionate (EPP)-induced rat ear edema model. The chemical composition of KH remedy was analyzed using gas chromatograph-mass spectrometer (GC-MS).

**Results:** The oral administration of KHP at the dose of 100 mg/kg significantly minimized paw edema at 1, 2, and 3 hours, while KHE at the dose of 100 mg/kg was noticeably reduced at 2 and 3 hours after carrageenan injection. The topical application of KHP at the concentration of 1% w/v remarkably reduced ear edema at 30, 60, and 120 minutes while KHE at all concentrations decreased the swelling at 120 minutes after EPP induction. The main constituents of KHE were ethyl *p*-methoxycinnamate (18.64%) and patchouli alcohol (16.38%).

**Conclusions:** The study indicated that the KH remedy possessed an acute anti-inflammatory effect in both edema models. KHP showed acute anti-inflammatory effects higher potent than KHE. These findings support the traditional use of KHP for both oral and topical administration for the treatment of acute inflammation-related diseases.

**Keywords:** Kheaw-Hom remedy, Anti-inflammatory activity, Edema, Chemical composition, Animal model

**DOI:** <https://doi.org/10.14456/2022s10740>

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