

Test of analgesic and anti-inflammatory activity of Kelor leaves (*Moringa oleifera*, Lam) *in vivo* and *in vitro*

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ABSTRACT

The purpose of this study was to determine the protective potential and analgesic effectiveness of Kelor leaf infusion (*Moringa oleifera*, Lam) *in vivo* and anti-inflammatory tests *in vitro*.

For analgesic test, Kelor leaf infusion (*Moringa oleifera*, Lam) was used writhing test method, with mice test animals. For the writhing test, 4 groups of mice were given each Kelor leaf infusion with a dose of 1 g / kg bw, 3 g / kg bw, and 6 g / kg bw, and Acetosal 0.065 g / kg bw as a positive control group. Anti-inflammatory tests *in vitro* used the MTT test to see the% of living cells in macrophage cells (RAW 264.7) induced by LPS. The concentration of Kelor leaf infusion was used, 100 µg / mL, 50 µg / mL, 25 µg / mL, 12.5 and 6.25 µg / mL.

Protection potential and analgesic effectiveness of Kelor leaf infusion at a dose of 1 g / kg bw, 3 g / kg bw, 6 g / kg bw, compared to Acetosal dosage, are as follows: for analgesic protection potential of Kelor leaf infusion respectively: 11.48% , 37,33%, 42,61%, for the analgesic effectiveness of Kelor leaf infusion respectively: 32,71%, 106,39%, 121,43%. Cytotoxic test results on macrophage cells (RAW264.7) showed that the treatment that could increase the% of living cells after treatment with LPS (70.94 ± 0.08)% was treatment using Moringa leaf infusion, 100 µg / mL (76.45 ± 0.21)%, 50 µg / mL (79.13 ± 0.18)%, 25 µg / mL (78.77 ± 0.12)%, 12.5 µg / mL (81.81 ± 0.11)% and 6.25 µg / mL (83.12 ± 0.15)%. The results showed that *in vivo* and *in vitro* tests showed that Moringa leaf infusion had activity as analgesic and anti-inflammatory.

Kata Kunci: *Moringa leaf, analgesic, anti-inflammatory, stretching test, macrophage cell, MTT, LPS*