The antiinflammatory activity of Solanum trilobatum L. (S. trilobatum) or “Mawaeng krueo” fruit extracts was studied using the carrageenan-induced hind paw edema model in rats. S. trilobatum fruits were extracted by three different solvents, i.e. water (water extract), 95% ethanol (ethanolic extract) and 95% ethanol : HCl (10:1) (acidic extract). Oral administration of all extracts at a dose of 600 mg/kg significantly reduced rat paw edema at 1 hour after inflammatory induction (p < 0.05). The water extract of S. trilobatum exhibited a significant antiinflammatory effect (p < 0.05) only at 1 hour after carrageenan injection while the ethanolic extract showed a significant inhibition of rat paw edema at 1, 2 and 3 hours (p < 0.05). Like diclofenac, the acidic extract exhibited a significant reduction of the paw edema throughout a period of study for 5 hours. However, the extract possessed a less potent antiinflammatory activity than the reference drug. In conclusion, the present results demonstrate antiinflammatory activity of the extracts of S. trilobatum fruits.