

**PROTEIN DENATURATION INHIBITION EFFECTS OF
SPINACH SPINE (*Amarhantus spinosus L.*) LEAVES ETHANOL
EXTRACT ON *Bovine Serum Albumin* FOR ANTI-INFLAMMATORY
COMPOUNDS SCREENING**

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ABSTRACT

The aim of this research is to find whether spinach spine (*Amarhantus spinosus L.*) leaves ethanol extract are able to inhibit the denaturation of protein using *bovine serum albumin* as the screening assay for an anti-inflammatory compounds screening. This research aiming to replicate the inflammation process in an *in vitro* test using *bovine serum albumin* or BSA as the protein model. The sample were dried crushed before submerged with 96% ethanol as the solvent. The extraction method that were used in this research is maceration technique. Several concentration series were made for the spinach spine (*Amarhantus spinosus L.*) leaves sample which is 100 ppm, 10 ppm, 1 ppm, 0.5 ppm and for the positive control which is 40 ppm, 20 ppm, 10 ppm, 5 ppm, 2.5 ppm, 1.3 ppm by mixing it with *bovine serum albumin* solution. Each concentration were tested for it's heat induced protein denaturation inhibition activity. The result from this research concludes that spinach spine (*Amarhantus spinosus L.*) leaves ethanol extract are able to inhibit the protein denaturation process as much as 73,006% or more than the minimum inhibition rate required for further anti-inflammatory drug development process.

Keywords : *spinach, extract, denaturation, bovine serum albumin, anti-inflammation.*