



**The Effect of Methanol Extract of Soybean Glycine max L.  
Merr. on Serum Steroid Hormone in Rat  
(RattusnorvegicusL.)**

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**Abstract:**This research was to explore the genistein compound in soybean methanol extract and to study the effect of soybean methanol extract on the level of testosterone and estradiol of serum. Twenty male rats (*Rattusnorvegicus L.*) were divided into 4 groups, the first group as a control, the second to fourth groups were given soybean extract as much as 250, 500, and genistein 0.3 mg/kg of body weight respectively. Thin Layer Chromatography (TLC) and High Performance Liquid Chromatography (HPLC) were used to measure genistein compound in the extract. Measurement of testosterone and estradiol serum level were conducted using ELISA. Genistein identification result using TLC showed  $R_f$  spot value 0.43. Chromatogram peak of HPLC showed time retention 2.050 minutes and genistein level in 1 gram sample of soybean extract 0.6356 mg of genistein. Results *invivo* showed that 250 and 500 mg/kg of body weight of methanolic extract of soybean seed decreased the level of testosterone and estradiol serum. It could be concluded that soybean methanol extract significantly decreased the level of testosterone and estradiol serum for 52 days.

**Key Words:** *Soybean, genistein, testosterone, estradiol, male rat.*