

## **Effects of Saponin in *Sapindus rarak* on Rumen Microbes**

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### **Abstract**

The aim of the experiment was to examine the antiprotozoal activity of the pericarp from *Sapindus rarak* DC (Sapindaceae), well known for the high saponin content, for its potential to defaunate the rumen and hence enhancing rumen productivity. Raw material and extract of pericarp of *S. rarak* were screened for their effects on rumen protozoa and bacteria. The pericarp of *S. rarak* was extracted. The fractions were collected and monitored by TLC. The active compounds were tested *in vitro* for toxicity to rumen protozoa and on growth of pure cultures of rumen bacteria. The results showed that the saponin fractions of *S. rarak* exhibit antiprotozoal activity *in vitro*. Inclusion of methanol extract of *S. rarak* in the growth medium of pure cultures of rumen bacteria had no effect. In conclusion, *S. rarak* tested in this study has a great potential for suppressing rumen ciliate populations. Therefore, controlling rumen ciliate protozoa would be expected to lessen the dependence on protein supplementation which occurs frequently in animals receiving low-quality tropical forages.

Keywords: *Sapindus rarak*, saponins, antiprotozoal activity, rumen bacteria.