The effect of ratio combination and binders on the digestibility of mesquit (*Prosopis Juliflora)* leaves and pods

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DOI: https://doi.org/10.22271/veterinary.2023.v8.i4c.585

Abstract
Prosopis juliflora has long been used as a leguminous tree forage. However, the availability of high concentrations of tannins has hindered its usage. The study aimed at determining the most digestible ratio combination of *P. Juliflora* (PJ) leaves and pods and the effect of wood ash and bentonite on their digestibility. Therefore, *in-vitro* digestibility (IVD) trials were conducted on PJ leaves and pods (PJLP) at ratios of 0:100, 25:75, 50:50, 75:25, and 100:0 for 96 h with and without treatment. Gas produced was recorded at intervals of 0, 3, 6, 9, 12, 24, 48, 72, and 96 h. The results showed that the ratio combination significantly affects the digestibility of PJLP. It also showed that wood ash and bentonite affect the digestibility of PJLP at different ratios. It was concluded that the use of binders enhanced the digestibility of PJLP. However, they significantly positively affect pods compared to leaves.

Keywords: Bentonite, *in-vitro* digestibility, leguminous tree forages, natural binders, tannins, wood ash