

عنوان مقاله:

Dose Response to Carvone Rich Essential Oils of Spearmint (*Mentha spicata* L.): in Vitro Ruminal Fermentation Kinetics and Digestibility

محل انتشار:

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خلاصه مقاله:

The aim of this study was to assess the effect of several doses of spearmint essential oil (SEO; 0, 250, 500, 750 or 1,000 $\mu\text{g ml}^{-1}$ buffered rumen fluid) on the fermentation kinetic and digestibility using in vitro gas production technique. A total mixed ration (30% roughage: 70% concentrate) was incubated with buffered rumen fluid. In vitro gas production, asymptotic gas production (A), rate of gas production (μ), partitioning factor (PF), microbial biomass (MB), ammonia concentration and digestibility were determined. Increasing the dose of SEO decreased the parameters A and μ . Adding SEO, however, increased PF, ammonia concentration, apparent in vitro dry matter digestibility and true in vitro organic matter digestibility at the lower levels of SEO (250 and 500 $\mu\text{g ml}^{-1}$). But, at the level of 1,000 $\mu\text{g ml}^{-1}$, a decrease was observed for these parameters. The increment in PF and digestibility illustrate that SEO has a potential to modulate the rumen fermentation, which may be beneficial (at low doses) for improving nutrient utilization.

کلمات کلیدی:

Essential oil, Carvone, in vitro gas production, Partitioning factor, Spearmint

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