

## **In vitro efficacy of formulated protected fat from used cooking oil (UCO) on gas production, nutrient digestibility and rumen fermentation**

### **ABSTRACT**

This study was designed to determine in vitro gas production, nutrients digestibility, and rumen fermentation products of supplementary formulated dietary protected fat (PF) from used cooking oil (UCO). The dietary fat treatment was formulated from used cooking oil protected fat (UCOPF) and compared with other four dietary fat treatment were used cooking oil (UCO) and palm olein (PO which are active fat; palm olein protected fat (POPF) and commercial protected fat (CPF) which are inert fat added at 12 mg of dry matter (DM) in the 200 mg of basal diet (70:30 roughage to concentrate ratio). Control group contain basal diet without dietary fat supplement. Supplementation of dietary fat had no effect on gas production, pH, organic matter digestibility (OMD) and volatile fatty acid volatile fatty acids (VFA). The addition of fat in the form of oil and protected fat to in vitro setups up to 12 mg did not adversely affect the characteristics of rumen fermentation suggests that fat has a smaller impact on production of gas, digestibility of nutrients, and rumen fermentation products.