EVALUATION OF ALTERNATIVE METHODOLOGIES FOR DRY MATTER DEGRADABILITY DETERMINATION IN THE IN VITRO GAS PRODUCTION METHOD

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BACKGROUND

- The use of filter crucibles to determine the degradability increases the time required in the analytical process;
- Reducing the speed of obtaining experimental data;
- This has made it necessary to search for alternative methods that ensure a homogeneous digestion and filtration system for all samples and provide accurate and accurate results.

METHODS

- Treatments: 1) Filter crucible; 2) F57 bags (Ankom®) with non-degradable mass; 3) TNT bags weighing 100 g/m2 with non-degradable mass; 4) F57 bags (Ankom®); 5) TNT bags weighing 100 g/m2;
- The in vitro gas production method used was the semiautomatic one with pressure transducer;
- 8 bovines Nellore castrated male were used as content and ruminal liquid donors;
- A completely randomized experimental design was used, with 5 treatments, 4 blocks (inocula), and three replicates within each block;
- PROC GLM was used to adjust for multiple comparisons of the data using the Tukey's test at 5% significance.

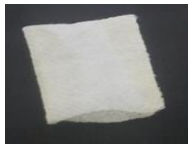
Table 1. Averages, MSE and probability of degradability parameters according time depending on treatments.

VARIABLES	TREATMENTS						
	Cad[1]	F57[2]	F57_Pb[3]	TNT[4]	TNT_Pb[5]	MSE[6]	P-value
IVDMD[7] 24h, %	62.15	63.24	64.66	65.68	67.67	1.27	0.0554
IVDMD 96h, %	73.13	68.00	70.05	71.98	71.95	1.41	0.1411

[1] filter crucible
[2]Ankom® bags
[3]Ankom® bags not degradable mass
[4]bags TNT made
[5]bags TNT made not degradable mass
[6]mean standard error
[7]*in vitro* dry matter degradability
h, hour

Filter crucible

F57 bags (Ankom®)



TNT bags weighing 100 g/m2

Semi-automatic pressure transducer

RESULTS

- There was no difference in the in vitro dry matter degradability for 24 or 96 hours (P-value 0.0554 and 0.1411, respectively), regardless of the treatment.

CONCLUSION

- Thus, the possibility of using TNT made bag to the detriment of the F57 bag is affirmed because of the high cost of this one in relation to that one.

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