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DETERMINATION METHODS FOR DRY MATTER OF LAMB MEAT

MÉTODOS DE DETERMINAÇÃO DA MATÉRIA SECA DA CARNE OVINA

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The determination of dry matter is extremely important because when comparing the nutritional value of food, we have to consider the respective levels of dry matter. The study evaluated four drying procedures for lamb meat obtained for the levels from dry matter. The experiment was conducted at UNESP, Jaboticabal. Samples of loin portion of lambs were used. The experimental treatments consisted in determining the dry matter in lyophilizer; lyophilizer followed by klin drying at 105°C; klin with forced airflow at a temperature of 55°C followed by klin drying at 105°C; and klin drying with forced airflow at a temperature of 55°C. The meat samples were triturated in a multiprocessor food. To determine the dry matter in the lyophilizer, samples of 3.5 g of meat were weighed and kept on the lyophilizer for 72 hour. For the method of drying by lyophilizer followed by klin drying at 105°C, samples of 1 g of meat originating from the lyophilization were used, and brought to klin at 105°C for 24 hours. For the conventional method (klin at 55°C followed by klin at 105°C), 3 g of sample were pre-dried at 55°C for 48 hours. After this period, the pre-dried material was crushed and new samples were weighed and dried at 105°C for 24 hours. For the method of drying by klin at 55°C, 3 g of samples were kept in a klin at 55°C for 48 hours. Based on the weights obtained before and after the drying procedures in each of the experimental treatments, the calculations were made to determine the dry matter content of the samples. The experimental design was randomized with four treatments and 12 repetitions. The data were submitted to analysis of variance and averages were compared by Tukey test ($P<0.05$). According to the results in Table 1, the average of dry matter obtained by the method of drying in the klin at a temperature of 55°C followed by klin drying at 105°C did not differ ($P>0.05$) from the lyophilized ones and were subsequently submitted to the klin at 105°C. The results of the 1st dry matter in a klin at 55°C were similar ($P>0.05$) to the ones obtained in the lyophilizer. The dry matter obtained by the lyophilization process should be considered as a first dry matter, and to obtain the final dry matter, samples must be submitted to the oven at 105°C for 24 hours.

Table 1. Averages of dry matter of sheep meat obtained by the different methods of determination

Methods	DM (%)[1]
Lyophilizer	32.14 a
Lyophilizer + klin at 105ºC	29.62 b
Klin at 55ºC + klin at 105ºC	28.65 b
Klin 55ºC	29.90 ab
P	0.0070

[1]Averages followed the same letters do not differ from each other by Tukey test ($P<0.05$)

Keywords: food analysis, klin, lyophilizer.