UruguayanTallows Characterization

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Eatable tallow is the product obtained fusing oily, from clean and healthy tissues (included the fats of clippings), and from muscles or bones adherents of bovine animals (*Bos tsurus*), lambs (*Ovis aries*) in good conditions of health in the moment of its sacrifice and whose has been treated and therefore are considered suitable for the human consumption.To obtain fat from the raw, this material must surrender to a previous treatment that breaks the adipose cells, by mechanical destruction, boiling or by treatment with alcáli. The easiest way consists of the mechanical disintegration (breakup) under heat, using steam in direct or indirect form. This product can be obtained by one of the following : discontinuous merger, humid constant merger and continues merger at low temperature. At present is used in the cosmetic industry (production of soaps), for nutrition (raw material for margarine), ranching (for the manufacture of food concentrated for animals), for the self-propelling industry (raw material for the production of biodiesel). The major purpose of this work is the tallow characterization from the determination of the following parameters :Moisture and Volatile Matter (g/100g of sample), Melting Point (ºC), Free Acidity (g. Oleic acid /100g of sample), Colour (yellow and red) and Insoluble Matter (g/100g.de shows) of 15 samples of animal tallow from Uruguay, in order to provide useful information for the selection of the material. The Norm used as reference was the AOCS (American Oil Chemistry Society). With the obtained information it has been realized a statistical exploratory analysis. The preliminary results, due to the high variability of the studied factors, do not allow to establish with the current number of samples a model who explains the above mentioned variability, neither at first, to reduce the quantity of factors to consider; in effect, the regression of the moisture against the rest of the factors determined the following probabilities of significance(meaning): $p=0.854$ (Melting Point), $p=0.169$ (yellow), $p=0.414$ (red) $p=0.493$ (acidity), $p =0.0069$ (insoluble Matter). Nevertheless, the study of the residual ones does not demonstrate a lack of a linear adjustment, by which at first such an adjustment is not discarded, considering a quantity of information substantially superior to that of the present preliminary study. The linear correlations (Pearson) and non parametric (Spearman) turned out to be low. The analysis of groupings allowed to separate the samples in three clearly differents groups, so if this behavior is the same in statistical samples of major volume, it would deserve a special study, tending to establish conjectures that explain this separation.