CHARACTERIZATION OF DULCE DE LECHE BY TEXTURE ANALYSIS, MOISTURE CONTENT, WATER ACTIVITY AND SOLUBLE SOLIDS CONTENT.

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The dulce de leche is a typical Latin American product, being produced in large scale in countries like Brazil, Chile and especially Argentina. In Brazil, the cultural differences, changes in technologies and formulations employed make it difficult to obtain uniformity in the dulce de leche found on the market. The aim of this work was to measure textural and physical-chemical parameters of ten commercial brands of this product and also to evaluate the relationship between these characteristics. The moisture content determination was made by the traditional method – Gravimetric, the water activity by Aqua Lab 4TE equipment, the analysis of texture by CT3 Brookfield Texture Analyzer, the soluble solids by Reichert AR 200 refractometer and the statistical analysis by SAEG software. The results were: water activity 0.869 (± 0.032); moisture 32.02% m/m (± 4.93); soluble solids content 65.65ºBrix (± 4.82); hardness 308.55g (± 161.22); adhesiveness 21.69mJ (± 14.77); cohesiveness 0.86 (± 0.15); stringiness 15.66mm (± 3.92); gumminess 273.81g (± 183.27); chewiness 47.90mJ (± 48.50). It was found significant correlation coefficients (p ≤ 0.05) between the following variables: water activity and soluble solids content, water activity and cohesiveness, soluble solids content and cohesiveness, hardness and adhesiveness, hardness and chewiness, adhesiveness and cohesiveness, adhesiveness and stringiness, cohesiveness and stringiness, cohesiveness and gumminess, cohesiveness and chewiness, stringiness and hardness, stringiness and gumminess. It was also found that the combination between physical-chemical parameters and rheological attributes is useful for the characterization and the evaluation of the quality of dulce de leche.