

Processing and Environment
Oral presentation

Elodie Arnaud, CIRAD-AMIS, Pôle Agroalimentaire, Station de la Bretagne, BP20, Saint-Denis de la Réunion Messag. Cedex 9, 97408, France

François Deumier, CIRAD-AMIS, Pôle Agroalimentaire

Michel Pina, CIRAD-AMIS, Laboratoire de lipotechnie, TA40/16, Montpellier Cedex 5, 34398, France

Jean Graille, CIRAD-AMIS, Laboratoire de lipotechnie

Bruno Barea, CIRAD-AMIS, Laboratoire de lipotechnie

Antoine Collignan, CIRAD-AMIS, Pôle Agroalimentaire

**Dry-fractionation of chicken fat at pilot scale.
Characterization of stearin fraction.**

The use of poultry abdominal adipose tissue in delicatessen processing leads to unacceptable products. The reasons of this problem are 1) its low melting point owing to its high unsaturated fatty acids content and 2) its lack of consistency due to the absence of connective tissue.

The objective of this study is to product fat solid fraction using dry-fractionation in order to elaborate 100% poultry delicatessens.

Dry-fractionation was performed at pilot scale using Tirtiaux process which enables a good control of cooling and agitation parameters. The fat crystals were separated from liquid oil by the use of a membrane filter press.

Initial fat and stearin fraction were analyzed in terms of fatty acids composition, iodine value, melting point, solid fat content and thermal properties were characterized by differential scanning calorimetry.

Whereas the initial chicken fat presents a melting point of 24°C, the stearin fraction obtained is solid at ambient temperature (mp = 45°C). The stearin fatty acids content is 42 % (w/w) of SFA, 37% of MUFA and 21% of PUFA while the raw chicken fat profile is 30, 45 and 25% for SFA, MUFA and PUFA respectively. The stearin already find applications as grease coating of pâté and others poultry products. Complementary works must be performed in order to elaborate products needing firm fats (dry-fermented sausages, “mortadelle”, etc).