Relationship between textural properties and sensory qualities of cookies made from medium-and long-chain triaclyglycerol (MLCT)-enriched margarines

ABSTRACT

BACKGROUND: This study aims to investigate the textural properties and sensory qualities of cookies made from medium and long-chain triacylglycerol (MLCT)-enriched margarines. Margarine with formulations of MLCT : palm olein : palm stearin, 60 : 30:10 and 70 : 20:10, were selected to produce cookies. The textural properties of cookies were determined using a texture analyser. Quantitative descriptive analysis (QDA) and acceptance test were carried out to describe the attributes and to evaluate the degree of liking of cookies, respectively. RESULTS: Cookies made from MLCT-enriched margarines showed high values for hardness, fracturability, but also for cohesiveness and adhesiveness. Trained panelists rated the cookies made from MLCT-enriched margarines to be lower as compared to those made from commercial margarine for most of QDA attributes. However, cookies made from MOS 603010 and commercialmargarines were scored similarly ($P > 0.05$) for all acceptance test attributes. Overall acceptability was found to be highly and negatively correlated for hardness, fracturability and cohesiveness ($R2 > 0.90$). Principal component analysis showed that the taste attribute of cookies and the%solid fat content of margarine at 35 ◦C highly influenced the overall quality of the cookies.