IDENTIFICATION OF PARAMETERS INVOLVED IN DISINTEGRATION OF COMMERCIAL CHEESE MATRIX AND LIPID DIGESTION BY USING AN *IN VITRO* STATIC DIGESTION MODEL

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Postprandial lipemia is dependent on the bioavailability and bioaccessibility of free fatty acids. The bioaccessibility of fatty acids can be modulated by matrix degradation's rate which can be impacted by inherent cheese factors as composition or textural properties. The aim of this study is to determinate which parameters influence cheese degradation. A static *in vitro* digestion model has been used on nine commercial cheeses: young and aged cheddar, regular and light cream cheese, parmesan, feta, camembert, mozzarella, and slice processed cheese. At the end of gastric digestion, camembert and mozzarella presented the lowest matrix disintegration whereas aged cheddar, regular and light cream cheeses showed the fastest. All cheeses were disintegrated at the end of duodenal digestion. The free fatty acids release was fast during the first 30 min of duodenal digestion. Correlation between cheese disintegration and its texture properties was analyzed by partial least square regression and revealed that springiness, hardness, cohesiveness and adhesiveness were inversely correlated to the rate of cheese disintegration. By modulating cheese texture, it could be possible to influence the matrix disintegration during gastrointestinal digestion which could have an impact on the release of lipids and subsequently on postprandial lipemia.