

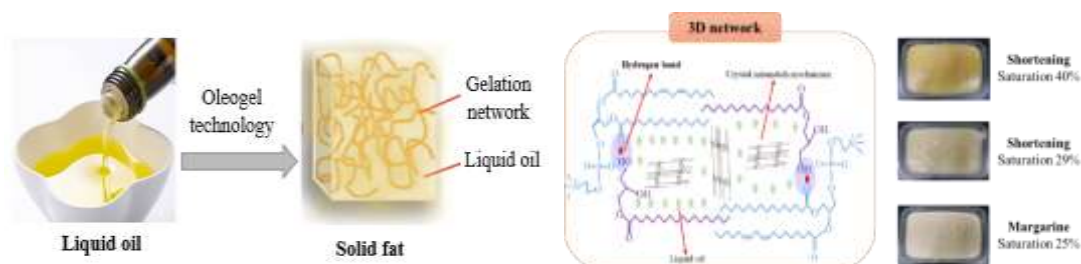
Low Saturation Baking Fat-oleogel

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Excessive intake of saturated fat has been a growing health concern as the cause of various diseases such as cardiovascular disease (CVD). Low-saturated fat, therefore, is in great need to satisfy consumers, especially the liquid oil. However, without the support of solid fat, liquid oil could not meet the requirements of baking. Oleogel is a new technology to realize liquid oil solidification as baking fat by gelators and produce fats with both low risk for health and good operability.



In this work, oleogel products were prepared. Stable 3D network structure was formed through hydrogen bonding and van der Waals force using synergism of the gelators and crystal mismatch mechanism. Saturation of the products was 25-40%, which was lower than that of traditional baking fats (>50%). Those products were not only healthier, but also appeared excellent baking performances in cakes, bread and biscuits. In addition, the products also showed better operability in compatibility between eggs and dough. This work fully demonstrated the application feasibility of oleogel in baked goods.