

Alpha Stable Fats, Properties and Possible Applications

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Normally most oil and fat mixtures are stable either in the beta' or beta crystal form. By mixing fatty acids that differ greatly in size and shape onto a glycerol unit triglycerides that are stable in the alpha form can be produced. These alpha stable fats often exhibit unusual physical properties when it comes to crystallization kinetics, structure and hardness.

This also greatly affects the behaviour in different food applications such as chocolate fillings. Data are presented for alpha stable fats. They are also compared with traditional beta' or beta stable fats with an emphasis on the different polymorphic behaviour that can be observed. Some results for trials with food applications will also be discussed.