

Emulsifiers and Stabilizers in Dairy Products



As we all know milk is a versatile starting point for many other dairy products such as yoghurt, ice cream, cheese etc. (Euston & Goff, 2019). Manufacturers always aim to produce good quality dairy products in terms of appearance, texture and flavour with longer shelf life.

Milk is an emulsion with fat particles dispersed in watery environment (Euston & Goff, 2019). Emulsifiers contain both water-loving and fat-loving properties which help oil and water to blend and not separate (Loi et al., 2019). The most common emulsifiers used in dairy systems are mono- and diglycerides (Loi et al., 2019) and non-dairy stabilisers like alginates, carrageenans, gums, and gelatine (Milard et al., 2018). Just a small quantity is added into dairy

products to improve the texture and stability, prevent oil from separating as well as extend the shelf life.

Complete separation of oil and water in dairy products is rare. However, the differences in density between oil and water often lead to formation of a ring at the top of dairy and non-dairy beverages which is known as creaming. It will give consumers the perception of poor quality. Mono- and diglyceride is effective in providing good emulsion stability as well as prevent creaming (Loi et al., 2019).

Stabilizers are used customarily to improve thickening, mouthfeel, product structure stability, water-binding capacity, creaminess and viscosity (Bhattarai et al., 2016; Saha & Bhattacharya, 2010). Incorporation of stabilizer into dairy products help to reduce the reliance on fats and thus enabling the development of low-fat and low-calorie products (Tasneem et al., 2014). Stabilisers are also added into ice creams to enhance smoothness in body and texture, as well as slow the melting rate (Abbas Syed, 2016).

The right combination of emulsifiers and stabilizers helps to promote the texture of dairy products and enhance the eating experience. A good tailor-made emulsifier and stabilizer blend will help you satisfy consumers' desire for a variety of delicious dairy products.

At DPO, we are honoured to be in partnership with **Palsgaard** to bring you a range of ingredient choices that could elevate your quality of life.

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