

2 minutes application break

Hydrocolloids

Facts

Origin Globally
Dates back Early 20th century
Ingredients Agar, carrageenan, xanthan gum or guar gum

Thickening and stabilizing agents in food and other products

MixSing Vortex



Design

Shear	CFD simulations confirms $>200,000 \text{ s}^{-1}$
Design	According to European legislation and CE marked
Hygiene	Complying with EHEDG guidelines
Viscosity	Up to 1,000 cP
Accessories	Table
Materials	Stainless steel: AISI 316L. All materials: EC 1935

Insight

Hydrocolloids are food ingredients that thicken, stabilize, and emulsify food products. They are derived from natural sources such as plants, seaweed, and microbes and are composed mainly of carbohydrates. The first use of hydrocolloids in food can be traced back to ancient times when thickeners such as starch from various plants were used in cooking. Scientists studying these ingredients first coined the term “hydrocolloid” in the early 20th century.

The most common types of hydrocolloids used in the food industry include agar, carrageenan, xanthan gum, and guar gum.

Agar is derived from red algae and is commonly used as a gelling agent in jelly, ice cream, and other desserts. Carrageenan is extracted from Irish moss and is used as an emulsifier and thickener in dairy products such as milk, cheese, and yoghurt. Xanthan gum is derived from a microorganism called *Xanthomonas campestris* and is used as a thickener and stabilizer in various products such as salad dressings, sauces, and ice cream. Guar gum is derived from the seeds of the guar plant and is used as a thickener and stabilizer in food products such as sauces and gravies.

Hydrocolloids are used in many food

products, such as ice cream, yoghurt, jellies, and processed meats, to improve texture, stability, and appearance. They can also be used as fat replacers, emulsifiers, and texturizers in low-fat and reduced-calorie products. They are also used in other industries, such as oil and gas, paper, and cosmetics.