

At a Glance

Hydrogenation with MONCAT® Nickel catalysts



- improves the oxidative stability
- modifies texture and melting properties
- reduces triglycerides and free fatty acids

Interesterification with Sodium Methylate Powder



- initiates the fatty acid exchange
- modifies the desired melting behavior

Purification with Alumina, Silica Gel and Bauxite



- enables chromatography, batch extractions and decolorization
- removes impurities
- used for bleachings

HYDROGENATION + INTERESTERIFICATION

**Avoidance of trans fatty acids in manufacturing
semi solid oils/fats, such as margarine**

EVONIK CATALYSTS

WHAT'S IN IT FOR YOU IN A PARTNERSHIP WITH EVONIK?

- Access to **long standing expertise** in catalyst and additive applications
- **Broad existing catalyst portfolio** proven in various applications and ready to go
- Collaboration with **renowned partner** for quality requirements in life science and fine chemical applications
- **Global presence** for support and local production
- **One Shop solution** for manufacturing oleochemicals and processing edible oils & fats

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Evonik Catalysts

Complete Package for Oleochemicals and Edible Oils & Fats



ADVANTAGE OF COMBINATION

A full **Hydrogenation** combined with an **Interesterification** vs. partially hydrogenated oils leads to the **Avoidance of trans fatty acids in manufacturing semi solid oils/fats, such as margarine.**

MONCAT® Nickel Catalysts for Hydrogenation

are supported reduced nickel catalysts embedded in pastilles of hydrogenated vegetable oil. Their ease of use make them ideal for the manufacture of soaps, oleochemicals, vanaspati, margarine, stearic acid, 12-hydroxy stearic acid and many other products.

Sodium Methylate Powder for Interesterification

is a colorless, highly hygroscopic, strongly basic solid that is highly reactive with water and acids. The powder form assures a minimal formation of unwanted methyl esters.

Alumina, Silica Gel and Bauxite for Adsorption/Separation

are adsorbents that have been optimized to efficiently separate product from impurities at the molecular level. Available in different sizes, shapes and sometimes pHs, our complete portfolio of purification adsorbents enables us to tackle your individual challenge.

Hydrogenation with

MONCAT® Nickel Catalysts

- improves the oxidative stability of fats and oils for increased shelf-life
- modifies texture and melting properties of fats and oils for improved products
- reduces triglycerides as well as free fatty acids for oleochemical production
- reduces triglycerides for foods and food precursors.

Interesterification with

Sodium Methylate Powder

- rapidly breaks the ester bonds, thus initiating the fatty acid exchange in between the molecules.
- no formation of trans fatty acids.
- modifies the desired melting behavior of the margarine with minimal product losses

Purification with

CHROMATOCEL® silica gel and alumina

- used for liquid chromatography, batch extractions and decolorization
- separates polar and charged molecules from oils and phospholipids
- can be used to remove a wide variety of impurities from fine chemical or pharmaceutical products

DYNOCEL® 600/900 activated alumina

- granular adsorbent available in 14x28 mesh or 20x50 mesh
- particularly useful for removing low level polar or charged impurities from oils

PUROCEL® bauxite

- for improving color & odor of free fatty acids
- very effective in removal of metal impurities, soaps etc. from aqueous & hydrocarbon streams