



HYDROGENATION OF FATS

Hydrogenation of fats is a chemical process in which unsaturated fats are converted into saturated fats by adding hydrogen atoms to the double bonds present in their chemical structure.

- ✦ This process is typically carried out using a catalyst, such as nickel or palladium, at high temperatures and pressures.

Purpose

To increase the stability and shelf life of fats and oils.

- ✦ Saturated fats are more resistant to rancidity and oxidation compared to unsaturated fats, which tend to become rancid more quickly.
- ✦ By hydrogenating fats, food manufacturers can produce solid or semi-solid fats with a desirable texture and longer shelf life.

Limitation: Formation of trans fats

- ✦ These hydrogenated fats, commonly known as **trans fats**, are widely used in the food industry.
- ✦ However, extensive research has shown that consumption of trans fats is associated with an **increased risk of cardiovascular diseases**.
- ✦ As a result, many countries have implemented regulations to limit or ban the use of trans fats in food products.