



## Specialty Materials



The Specialty Materials Business focuses on harnessing membrane technologies to develop and commercialise polymers and specialty materials such as L-lactic and polylactic acid from natural resources like corn and sugar cane. These polymers are widely used in cosmetics, pharmaceuticals, food & beverages, textiles, food packaging and fibre industries.

## **L-Lactic Acid**

L-Lactic acid is a natural product of fermentation processes and it is made from a renewable biomass such as corn. Hyflux uses its advanced membrane technology in the downstream processing to separate, concentrate and purify L-lactic acid, enabling an eco-friendly process for the production of L-lactic acid.

Energy requirements are greatly minimized:

- No solvents are required in the process
- Customised to meet quality requirements
- Products are simultaneously separated and purified
- Production of usable by-products due to cleaner processing

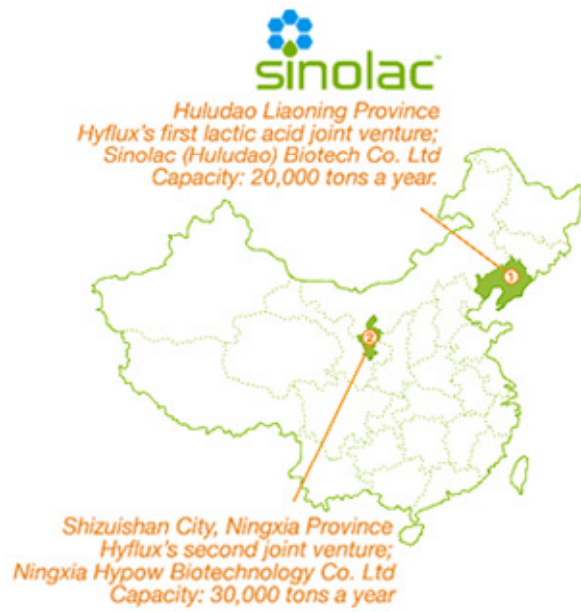
## **Polylactic Acid**

Polylactic acid is an eco-friendly and biodegradable aliphatic polymer from renewable resources. Its raw material is derived from fermenting glucose from renewable agricultural products such as corn and sugar cane. Polylactic acid exhibits a wide range of outstanding properties, equivalent or superior to many petroleum-based polymers.

Polylactic acid has many potential uses in a multitude of applications especially in the food packaging and fiber industries. This thermoplastic material can be processed similarly as conventional polymers using a variety of techniques such as injection and blow molding, blow film, sheet extrusion and fibre spun into various consumer products.

Our Polylactic acid is produced from high purity L-lactic acid manufactured using Hyflux's proprietary advanced membrane technology. This L-lactic acid is polymerised using Hyflux's Proprietary Synthesis Process. The entire processing technology is cleaner, more efficient and cost-competitive.

## Landmark Projects



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