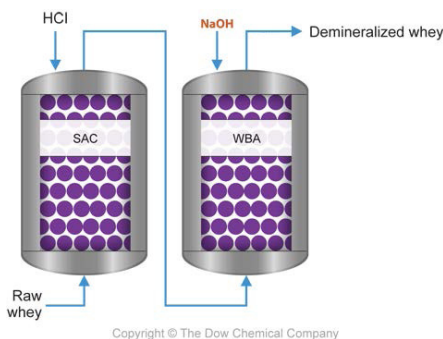




Whey Demineralization



Typical Ion Exchange Demineralization System Layout



There are three main technologies that can be applied to whey demineralization, depending on the level of purification needed

- Nanofiltration (NF)
- Electrodialysis (ED)
- Ion Exchange (IX)

Relative performance of whey demineralization technologies:

Technology	NF	ED	IX
Demineralization	< 30%	50 - 70%	>90%
Lactose content	< 84%	85 - 86%	> 87%
Ash content	> 5%	4 - 2.5%	< 1 %

Dow Water & Process Solutions offers a range of products to support both NF and IX

Nanofiltration

Dow **HYPERSELL™ NF245-8038**

- Contains robust DOW FILMTEC™ membrane
- Precision automated rolling
- Machined polypropylene shell

The rugged **HYPERSELL** products offer:

- Safer and faster loading and removal of elements
- Reduced bypass and premature element failure
- Improved hydrodynamics

Ion Exchange

SAC: Strong Acid Cation Resin

Product: DOWEX™ MONOSPHERE™ C-600B Matrix: Gel
Uniform particle size resin designed to exhibit faster kinetics, improved regeneration efficiency, higher operating capacity and reduced regenerant usage

WBA: Weak Base Anion Resin

Product: AMBERLITE™ FPA51 Matrix: Macro
Styrenic resin that combines high physical stability with high operating efficiency to give long process cycle times

Product: AMBERLITE FPA55 Matrix: Gel
Acrylic resin that resists organic fouling giving a longer lifespan of the resin bed and shorter rinse cycles

Contact us today to learn more about our resin solutions.

Email DowCIG@dow.com, or call 1-800-447-4369

www.dowwaterandprocess.com/applications/food_bev/index.htm

Notice: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.