



DOWEX Ion Exchange Resins

Preparation of Chromatographic Separation Resins – Food Processing and Food Contact

Scope

This pre-treatment applies to anion and cation exchange resins used for chromatographic separation applications. Ion exchange resins for other applications require a different procedure, also available from The Dow Chemical Company as Tech Fact "DOWEX* Resins – Food Processing and Contact," Form No. 177-01850.

Good practice in the food processing field requires careful preparation of processing equipment prior to use. To assist the food processor in preparing chromatographic separation resins for such use, the following conditioning procedures are outlined.

Experience has shown that these simple steps, done under normal processing conditions and supplementing the normal manufacturing pretreatments, should assure that the level of organic extractives in the resin-in-use complies with the U.S. Food, Drug, and Cosmetic Act as amended under Food Additive Regulation 21 CFR #173.25.

General Conditioning Steps

To a bed of resin in the normal backwashed, settled and drained condition:

Flush the resin bed with at least three bed volumes of treated water¹ for a contact period of at least two hours at a temperature at least 2°C (4°F) above the expected operating temperature. Continue flushing until the effluent is clear. If the resin is backwashed with hot treated water, the backwash volume can be counted toward the three bed volumes.

¹ For most chromatographic resins, properly treated water must be hot, degassed, and deionized. For the DOWEX MONOSPHERE* 99K family of resins (potassium form resins), the properly prepared rinse water can be hot (80°C (180°F) minimum), degassed, softened water.

DOWEX Ion Exchange Resins

For more information about DOWEX resins,
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WARNING: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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