



## **DOWEX™ Ion Exchange Resins**

### Procedure for Acid Cleaning of Mixed Bed Resins

#### **Procedure**

Acid treatment of a mixed bed is used to remove inorganic contaminants such as metals and also silica. It can, therefore, be applied to both cation and anion components in situ.

Used, mechanically weak resins, may suffer from large osmotic (fast swell/shrink) and mechanical (air scrubbing) strains. It is advisable to use gradual changes in solution concentrations and to minimize the mechanical stress.

The recommended procedure is as follows. The acid concentration should be increased gradually to avoid excessive osmotic stress to the resin:

1. Exhaust the mixed bed with a NaCl solution.
2. Pass upflow 1 bed volume of 2% HCl solution at a contact time of 30 minutes.
3. Pass upflow 1 bed volume of 10% HCl solution at a contact time of 30 minutes.
4. Leave to soak overnight with occasional air injection to facilitate contacting of the acid with the resins.
5. Displace/rinse the acid downflow with a minimum of 5 bed volumes DI water.
6. Perform a double regeneration

**DOWEX™ Ion Exchange 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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