

Cadmium levels found in potable water supplies will in almost all cases be the result of the deterioration of galvanized plumbing, industrial waste contamination, or possibly the result of surface water contamination by certain fertilizers.

Although it is possible for trace cadmium to be chelated or sequestered as with any metal, it will generally be found in the dissolved ionic form. In this form, cadmium may be removed by standard, strong acid cation resin, such as ResinTech CG8 regenerated with sodium chloride (NaCl). It must be assured that the ten ppb MCL limit can be met by the ion exchange system at all operating conditions.

Actual operating tests to verify performance are recommended. The cadmium exchanged onto the resin can be effectively removed by a sodium chloride regeneration.

Cadmium can also be removed by ResinTech SIR-300, a chelating resin that is selective for heavy metals. It removes metals without interference from any hardness ions that may be present and so can exhibit long services runs. Regeneration of SIR-300 is a somewhat complex process using acid stripping and a caustic neutralization, and so should be performed off-site or the resin could merely be replaced after exhaustion.