

Answer on the question #49348, Chemistry, Other

Question:

can you please tell me one equation of chemistry for how do hard water is converted into soft water?

Answer:

Water softening is the removal of calcium, magnesium, and certain other metal cations in hard water. The resulting soft water is more compatible with soap and extends the lifetime of plumbing. Water softening is usually achieved using lime softening or ion-exchange resins. The ion exchange resins are complex sodium salts. Water flows over the resin surface, dissolving the sodium. The calcium, magnesium, and other cations precipitate onto the resin surface. Sodium goes into the water, but the other cations stay with the resin. Very hard water will end up tasting saltier than water that had fewer dissolved minerals.

