

## PRODUCT INFORMATION

### Nitrate Reduction System



A Nitrate reduction system will lower nitrate levels in water. The most common nitrate removal method is by ion exchange resin. Point of use filters can give enough water for one tap. Point of entry systems can treat the water for the whole house or factory



#### Why remove nitrate?

Nitrate levels in many waters are often high. Over 60% of nitrate enters water from agricultural land. High concentrations of nitrate in water can cause methemoglobinemia in very young children (blue baby syndrome). In extreme cases this can be fatal. The nitrate is converted to nitrite in the body which in turn interferes with oxygen up take in the blood. The current regulatory standard of 50 mg/l nitrate is derived from the standard in the European Union's Drinking Water Directive, which is intended to ensure that drinking water will not cause methemoglobinemia.

#### How do I remove Nitrate?

The most common method of reducing nitrate is with an ion exchange resin. The nitrate rich water passes over a resin where the nitrate is exchanged for chloride ions. When no more nitrate can be exchanged the resin needs to be replaced or regenerated by rinsing with salt.

Reverse Osmosis can also remove nitrate from water. The water passes through very small pores at a high pressure. This combination stops most contaminants just allowing water molecules through. However RO system are comparatively expensive, they may require the water to be pre-treated. They also give relatively low flow rates.

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