Water treatment for Nitrate

Mahshid Keshavarzi[1], **Elnaz Zehtab Lotfi**[2]

[1]**microbiologist, East Azarbaijan water and waste water quality control**
kasha_ma@yahoo.com
[2]**chemist, East Azarbaijan water and waste water quality control elnazzlo@yahoo.com**

Abstract
Nitrate concentrations in surface water and especially in ground water have increased in Canada, the United States, Europe, and other areas of the world. This trend has raised concern because nitrates cause methemoglobinemia in infants. Several treatment processes including ion exchange, biological denitrification, chemical denitrification, reverse osmosis, electrodialysis, and catalytic denitrification can remove nitrates from water with varying degrees of efficiency, cost, and ease of operation. Available technical data, experience, and economics indicate that ion exchange and biological denitrification are more acceptable for nitrate removal than reverse osmosis. Ion exchange is more viable for ground water while biological denitrification is the preferred alternative for surface water. This paper reviews the developments in the field of nitrate removal processes.
Keywords: Nitrate Removal, Denitrification, Ion Exchange,