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9<sup>th</sup> Euro-Global Summit & Expo on

# Food & Beverages

July 11-13, 2016 Cologne, Germany



## **Ingegerd Rosborg**

Miljo Naringsbalans Vatten, Sweden

### The importance of minerals from bottled waters

The study from 2002 presents the concentrations of about 50 metals and ions in 33 different brands of bottled waters on the Swedish market. Ten of the brands showed calcium (Ca) concentrations <10 mg L/1 and magnesium (Mg) levels <3 mg L/1; origin primary rock bedrock. Three of these had low concentrations of sodium (<7 mg L/1), potassium (<3 mg L/1) and bicarbonate (<31 mg L/1). Contrary, water with high concentrations can substantially contribute to the daily intake of elements. Nine of the brands were collected from limestone regions. They showed Ca-levels >50 mg L/1, maximum of 289 mg L/1. Mg-levels were >90 mg L/1 in two brands. Two waters were supplemented with Na2CO3 and NaCl, resulting in elevated Na (644 and 648 mg L/1) and chloride (204 and 219 mg L/1). Such water types may make a substantial contribution to the daily intake of NaCl in high water consumers. The storage of carbonated drinking water in aluminum (Al) cans increased the Al-concentration to about 70 lg L/1. The levels of Fe (iron) and Mn (manganese) and potentially toxic metals were generally low. Nowadays bottled waters are more and more RO (Reverse Osmosis) treated, causing completely de-mineralized waters, comparable to distilled or rain water. Acute symptoms from drinking many liters of RO water are decreased electrolyte levels causing tiredness, weakness, headache, trembling, coma, and brain edema. In the long run; acidosis, with increased risk for cardiovascular diseases, osteoporosis and diabetes etc., is a great risk.

#### **Biography**

Ingegerd Rosborg has completed her PhD from Lund University and performed additional studies and projects at both Lund University, Sweden, and KTH, Royal Institute of Technology, Stockholm, Sweden. She has been working as a Nutrient Therapist, Drinking Water Analyst and Health Evaluator at her company Miljö Näringsbalans Vatten (Environment Nutrient Balance Water) since 2000. She has published more than 25 papers in reputed journals and in COST Action 637, "Metals and related substances in drinking water". She is an IWA specialist group Swedish representative.

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