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### THE OCCURANCE OF ALUMINIUM IN MUNICIPAL TREATED WATER SUPPLY OF SOUTH EAST AREA OF IRAN

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#### Abstract:

In recent years, a potential connection between human intake of aluminum and Alzheimer's disease has drawn attention to the aluminum concentration in drinking water. It is therefore of interest to investigate the aluminum concentration in drinking water, produced under different circumstances. A random selection of 152 water samples were taken by the supply source including ground, surface and a combination of both for determination of aluminum concentration in the type of water (raw, finished, or untreated distribution) from Bushehr and Borazjan areas in which aluminum sulphate is used as a coagulation agent. Ground, raw and finished waters samples were collected from each facility, four times throughout a year and analyzed for aluminum by eriochrome cyanine R method. The results indicate that aluminum is more likely to exist in finished waters than in raw and ground water of Bushehr & Borazjan municipal water, by which aluminum sulphate is the main causative agent of increasing the aluminum concentration of finished water below the guideline value regarding the W.H.O standard, but 33.5 times more than US limitation. Therefore, application of iron coagulant compounds should be reconsidered.

#### Keywords:

Aluminum , Alum , coagulant

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