

عنوان مقاله:

Evaluating Corrosion and Scaling Potential of Drinking Water Supplies in Juybar, North of Iran

محل انتشار:

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خلاصه مقاله:

Background & purpose: One of the major factors in the quality of drinking water is corrosion and scaling. The aim of the present study was to evaluate corrosion and scaling potential of drinking water supply network in Juybar (A city in Iran). **Materials and Methods:** 60 samples of drinking water in distribution network were collected randomly in summer and autumn seasons and transferred into laboratory. Some parameters including temperature, TDS, pH, total alkalinity and hardness and calcium hardness were measured based on the standard methods. The corrosion and scaling potential of water have been evaluated by Langelier, Ryznar, Puckorius and aggressive indices. The collected data were analyzed using descriptive statistics. **Results:** The mean values of pH, TDS, total alkalinity and calcium hardness in summer were 7.6, 637.5, 300, and 120 mg/l, respectively; and in autumn were 7.5, 646.5, 301, and 118 mg/l, respectively. The Langelier index in summer and autumn were 0.57 and 0.5, respectively, which showed that water had a potential for scaling. The Ryznar index in summer and autumn were 6.42 and 6.53, respectively indicating that water samples had neither scaling, nor corrosive potential. The Puckorius index in water samples was also determined to be 5.83 and 5.92 in summer and autumn, respectively, which showed that the samples were depositing water. Based on the aggressive index, the water samples in summer and autumn were 12.65 and 12.59, respectively, showing that water was mild scaling. **Conclusion:** This study showed that the drinking water of Juybar city has tendency to scaling.

کلمات کلیدی:

Drinking water, Distribution systems, Corrosion and scaling

لینک ثابت مقاله در پایگاه سیویلیکا:

