

## عنوان مقاله:

Evaluation of Corrosion and Scaling Potential of a Water Treatment Plant

## محل انتشار:

مجله آرشیو علوم بهداشتی، دوره 2، شماره 2 (سال: 1392)

تعداد صفحات اصل مقاله: 7

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## خلاصه مقاله:

**Background & Aims of the Study:** We evaluated corrosion and scaling potential of watertreated by Takab city (Western Iran) water treatment plant (called Chahar Tagh facilities) using field observation of water treatment plant, and study of physical and chemicalparameter values of water.**Materials & Methods:** In this cross-sectional study, during a 10-month period (fromJanuary to October 2012) in each month, 15 grab samples with 2 to 3 L of water werecollected for analysis. Some physical and chemical parameters such as temperature, pH,total dissolved solids, calcium and magnesium hardness, calcium and magnesium ionsconcentration, total alkalinity, bicarbonate concentration and electrical conductivity weremeasured. The corrosion and scaling potential of water were calculated by Langeliersaturation index (LSI), Ryznar stability index (RSI), aggressive index (AI) and Puckoriuscaling index (PSI).**Results:** Values recorded for all physicochemical parameters were in acceptable standardlevels. The calculated values of LSI index indicated slightly scale forming and corrosive,RI index showed heavy corrosion, AI index showed water is non-aggressive and based onPSI index results water is likely to dissolve scale. Based on LSI, RI, AI and PSI monthlyindices results the water of water treatment plant showed a uniform quality of corrosion andprecipitation potential.**Conclusions:** The results showed that values of all measured physical and chemicalparameters were in the range of national and international standards. Based on LSI and Alindices results, water tends to scale forming while .based on RI and PSI indices results watertend to be corrosive

## کلمات کلیدی:

Aggressive IndexLangelier Saturation IndexPuckorius Scaling IndexRyznar Stability IndexTakab, IranWater Corrosion IndexWater Scaling IndexWater Treatment Plant

## لینک ثابت مقاله در پایگاه سیویلیکا:

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