

عنوان مقاله:

Microbiological and Chemical Findings of Water Used for Various Industrial Processes in Babol Car Factory, Iran, in ۲۰۱۳ A Case Study

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خلاصه مقاله:

Abstract Background and purpose: According to the reported problems in area of the inappropriateness of water quality which used for washing and staining of car apparatuses in a car factory, this research was carried out for identification of physical, chemical, and microbiological characteristics of the consumed water in Babol car factory, Iran. Materials and Methods: Physical and chemical parameters of water such as total solids, total dissolved solids (TDS), turbidity, pH, electrical conductivity, total alkalinity, total hardness (TH), cations (Ca^{2+} , Mg^{2+} , Fe^{2+} , Mn^{2+} , Zn^{2+}), and anions (SO_4^{2-} , Cl^- , NO_3^-) were analyzed based on standard methods for examination of water and wastewater. The samples were taken from five units and were precipitated and plated on Sabouraud dextrose agar supplemented with chloramphenicol and blood agar and eosin methylene blue media. Results: TDS, turbidity, pH, TH and ammonium ion were 402 mg/L, 10 NTU, 7.8 , 208 mg/L and 0.04 mg/L, respectively. Ten genera of fungal colonies were isolated from these units, which from them yeast *Penicillium* and *Cladosporium* were the most prevalent. Five genera of bacteria were isolated from these samples. *Enterobacteriaceae*, *Pseudomonas*, and *Bacillus* were the most prevalent bacteria in water. Water quality in the activation and fixation units were the most contaminated with fungi and bacteria, respectively. Some of these units were without fungal and bacterial contaminations. Conclusion: The fungal and bacterial contaminations can be changed the quality of consumed water in the different processes such as color and turbidity. Thus, we need to use some water

کلمات کلیدی:

Rainwater, Industrial water, Fungi, Bacteria, Car factory

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