

SavariJa2004@yahoo.com :

pH ( / NTU) ( °C)  
( mg/l) ( mg/l) ( / mg/l) DO ( mg/l) TDS ( μs/cm) EC ( / ) pH<sub>s</sub> ( / )  
μg/l ( / μg/l) ( / ) ( mg/l) ( mg/l)  
( / mg/l) ( / mg/l) ( / mg/l) ( / mg/l) ( / )  
/ SPSS

TDS EC

%

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/

/

( )

(%)

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( Biofilm)

(Oconnor 2001)

%

)

(

( )

pH

( Stabilize)

mg/l

(Quebec Canada)

(Loewenthal et al. 2004)

Untied State

Environmental protection Agency (USEPA)

Safe

Drinking Water Act (SDWA)

Rodriguez and Housseini )

(Kansas) (2003)

Primary Standard

Maximum Contaminant

Level (MCL)

National Interim primary Drinking (Corrosion)

(Seth et al.2004)

Water Regulation (NIPDER)

(Secondary Standard)

(RSI)

Ryznar Stability Index (RSI)

(Singly and Lee 1998)

Electrical Conductivity

Total Dissolved Solids (EC)

(Dietrich et al.2004)

Dissolved Oxygen (TDS)

American Water Works

(DO)

Association (AWWA)

pH<sub>s</sub> pH

(AWWA 2003)

University of )

(Sheffield)

DO ، pH ، TDS ، EC

pH (Aqualytic) TDS و EC ، (Testo) Red )

DO (WTW 330/SET)

(water

(WTW 340/SET OXI)

APHA, AWWA, WEF )

pH<sub>s</sub> pH

(1998)

(RSI)

$$RSI = 2pH_s - pH$$

$$pH = pH$$

/ SPSS

pH = pH<sub>s</sub>

).

/

( ) ( )

(HDR Engineering Inc 2001

/

( )

pH

)

EPA 2004, 2005,

(2002

( °C)

( / Nephelometric Turbidity Unit (NTU)

Micorsiemens per ) EC ( / ) pH<sub>s</sub> ( / ) pH

( mg/l) TDS ( centimeters (μs/cm)

mg/l) ( mg/l) ( / mg/l) DO

( mg/l) ( mg/l) (

( / μg/l) ( / )

( / mg/l) ( / mg/l) ( / μg/l)

( / mg/l) ( / mg/l)

(% / % / % / )

(Atomic absorption)

Analytic Jenna AAS vario 6

( mg/l) ( μg/l)

EPA 2004, 2006, 2005, ) ( / mg/l)  
( ) .(2002

TDS ( ) ( )  
) One -Way )  
% (ANOVA

mg/l

.( )

pH

pH .

CO<sub>2</sub>

pH . OH<sup>-</sup> H<sup>+</sup>  
pH = Log [ H<sup>+</sup> ]  
pH . °C

pH

pH<sub>s</sub> .

(EC).

pH

(μs/cm)

). ( ) Mmho/cm

.(

.( )

EC

EC TDS

TDS

( )

Larson – skold Index (Larson Ratio)

TDS

Mmho/cm

°C

...

.( )

%

t-test

Sulfate Reducing Bacteria (SRB)

USEPA

( / mg/l) ( μg/l) ( μg/l) )

( / mg/l) ( / mg/l) ) (

EPA 2004, 2006, 2005,) (P = / ) .(

.(2002 USEPA.

EPA 2004, )

(P= / )

.( 2005, 2002

( )

)

.(

%

USEPA

t-test

.(P= / )

%

%

(% / ) (% / ) (% / )

pH

( )

(EPA 2004, 2006, 2005, 2002)

( )

EC

TDS

/

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pH <sub>s</sub>	pH			EC ( $\mu$ s/cm)	(NTU)	(mg/l)	ALK (mg/l)	Ca <sup>++</sup> (mg/l)	TDS (mg/l)	(°C)
/	/				/	/				
/	/				/	/				
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	*									
/ /	/ /				/					

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/ / \*



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(RSI)

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( )

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(mg/l)    (mg/l)    (mg/l)    (mg/l)    (µg/l)    (µg/l)

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/    /    /    /    /    /

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/    /    /    /    /    /

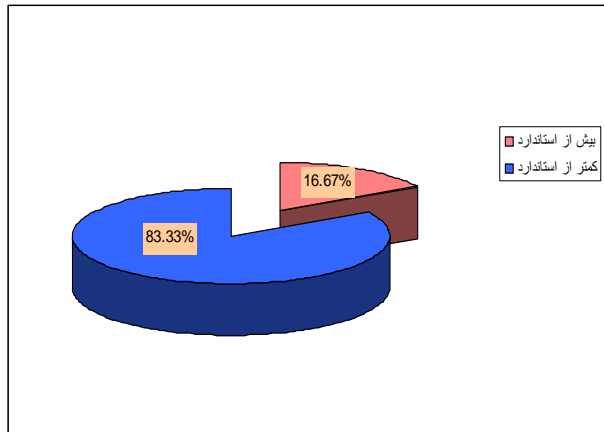
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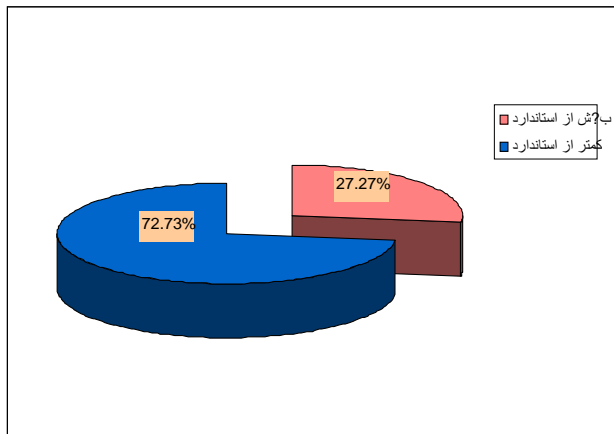
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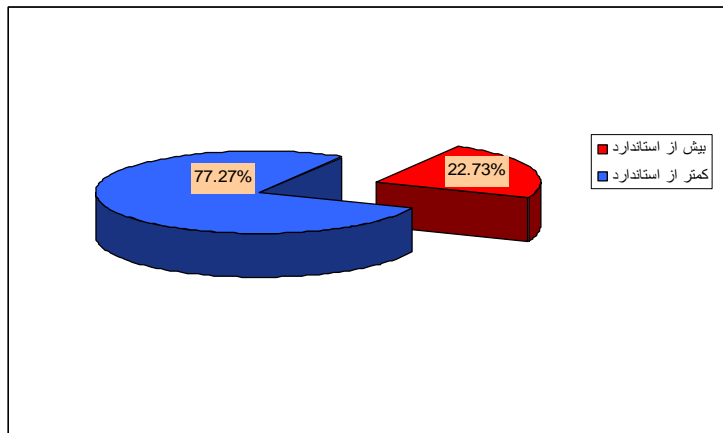
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(USEPA)

- System, Office of Water* (4606m). EPA – 816-R-20-009, [on line] Available from: <http://www.epa.gov/safewater>.
- EPA., 2004. Lead and Copper Rule: *A quick reference guide. Office of water* (4606). EPA 816-F-04-009. [on line] Available from: <http://www.epa.gov/safewater>.
- EPA., 2004. Edition of the drinking water standards and health advisories, EPA 822-R-04-005. Office of water protection agency Washington, DC. (EPA)
- EPA., 2005. Water on tap, what you need to know [www.epa.gov/safewater](http://www.epa.gov/safewater), safe drinking water hotline. 800-426-4791.
- EPA., 2006. List of contaminants & their MCLs, EPA July 2002, 816-F-02-013. <http://www.epa.gov/safewater/mcl.htm>.
- HDR Engineering Inc., 2001. Hand book of public water systems second edition, by John Wiley and Sons, copy right.
- Loewenthal, R.E., Morison, I. and Wentzel, M.C., 2004. Control of corrosion and aggression in drinking water systems, *water science and technology*, **49**(2), pp. 9–18, IWA Publishing.
- Oconnor, J.T., 2001. water quality deterioration in distribution systems, *water engineering and management*. 148.
- Rodriguez, M.J. and Housseini, D. 2003. portrait of drinking water quality in small Quebec municipal utilities, *water quality research journal of Canada*. 38.
- Seth, A., Bachmann, R., Boxall, J., Saul, A. and Edyvean, R., 2004. Characterization of materials causing discoloration in potable water systems, *water science and technology*. **49**(2), pp. 27–32. IWA Publishing.
- Singly, J.E. and Lee, T., 1998. Determining internal corrosion potential in water supply systems, committee report, *J. AWWA*. pp.11
- American Public Health Association, American water works association and Water environment federation 1998. Standard method for examination of water and wastewater, 20<sup>th</sup> Edition, New York.
- AWWA., 2003. *A bout drinking water*. [on line] Available from: <http://www.awwa.org/advocacy/learn/info/LFAQ.CFM>, assessed [cited 12 June 2007].
- Dietrich, A.M., Burlingame, G.A., Vest, C. and Hopkins, P., 2004. Rating method for evaluating distribution-system odors in comparison to a control, *water science and technology*. **49**(2), pp. 55–61, IWA Publishing.
- EPA., 2002. *Lead and Copper monitoring and reporting guidance for public water*