

Annex No. (1) Concerning Treated Wastewater Standards
Annexed to Cabinet Resolution No. (39) of 2021
Concerning the Executive Regulations of Federal Law No. (12) of 2018
Concerning Integrated Waste Management

Table (1-1): Technical Parameters of Wastewater

P2	P1	Standard	
Restricted recycle	Unrestricted recycle		
Prescribed Concentration	Prescribed Concentration	Unit	Parameter
6 to 8.5	6 to 8.5	-	pH
10	10	Mg/l	BOD5 (ATU)
20	10	Mg/l	Total Suspended Solids
10	5	NTU	Turbidity
0.5 to 1	0.5 to 1	mg/l	Residual Chlorine (total available)
> 1	> 1	mg/l	Dissolved Oxygen
General Requirements for Treated wastewater	Treated wastewater may be used pursuant to the specifications contained in this Annex to irrigate plant varieties that are used in cosmetic agriculture, windbreak forests, industrial uses or other uses determined by the Competent Authority, and it is prohibited to use it in irrigating crops of vegetables and fruits that are consumed by humans, or for the purposes of drinking, kitchen, bathing or swimming, provided that the Competent Authority conducts continuous inspection and permanent inspection of those crops		
	<ul style="list-style-type: none"> - Treated wastewater may be used for purposes other than irrigation, with notification to the Ministry of that. - Treated water may be disposed of from wastewater in the lands, in accordance with the land uses, soil quality, and nearby groundwater basins, with notification to the Ministry of that, and in the event that it is 		

	<p>discharged to the Maritime Authority, the marine environment protection standards contained in Cabinet Resolution No. (37) shall be followed.) for the year 2001 concerning the regulations for the Executive Regulations of Federal Law No. (24) for the year 1999 concerning the protection and development of the environment, or any higher standards issued by the Competent Authority.</p> <p>- installations shall develop plans to recycle treated water to ensure the preservation of the various elements of the environment.</p>
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Table (1-2): Standards for Microbiological Pollutants

P2		P1		Standard	
Restricted recycle		Unrestricted recycle			
Prescribed Concentration	Geometric Mean	Prescribed Concentration	Geometric Mean	Unit	Parameter
800	200	23	14	CFU or MPN/100ml	Faecal Coliform or E. Coli
104	35	24	11	CFU or MPN/100ml	Intestinal Enterococci
0	N/A	0	N/A	Number/l	Helminth Ova
N/A	N/A	100	N/A	CFU or MPN/ml	Legionella (in circulating water)

Table (1-3): Tracer Technical Characteristics

Parameter	Unit	Prescribed Concentration
Aluminium (Al)	mg/l	5.0
Arsenic (As)	mg/l	0.1
Beryllium (Be)	mg/l	0.1
Cadmium (Cd)	mg/l	0.01
Chromium (Cr)	mg/l	0.1
Cobalt (Co)	mg/l	0.05
Copper (Cu)	mg/l	0.2
Fluorides (F)	mg/l	1.0
Iron (Fe)	mg/l	5.0
Lead (Pb)	mg/l	5.0
Lithium (Li)	mg/l	2.5
Manganese (Mn)	mg/l	0.2
Mercury (Hg)	mg/l	0.001
Molybdenum (Mo)	mg/l	0.01
Nickel (Ni)	mg/l	0.2
Selenium (Se)	mg/l	0.02
Vanadium (V)	mg/l	0.1
Zinc (Zn)	mg/l	2.0

Table (1-4): Salinity Standards

Parameter	Unit	Prescribed Concentration
Electrical conductivity	(dS/m @ 25°C)	3.0
Total dissolved solids (TDS)	mg/l	2,000

Sodium Adsorption Ratio (SAR)	mg/l	2.9
Sodium (Na ⁺)	mg/l	9
Chloride (Cl ⁻)	mg/l	10
Boron (B)	mg/l	3
Bicarbonate (HCO ₃ ⁻)	mg/l	8.5

Annex (2) Standards for Sludge Generated by the Treatment Process
Annexed to Cabinet Resolution No. (39) of 2021
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Table (2-1): Standards for Microbiological Pollutants

B2	B1	Standard	
Restricted recycle	Unrestricted recycle		
Prescribed Concentration	Prescribed Concentration	Unit	Parameter
< 100,000	< 1,000	CFU/g dm	E. Coli
Not applicable	< 1	CFU/2g dm	Salmonella
< 10	< 1	No./50g dm	Helminth Ova

Table (2-2): Tracer Technical Characteristics

B2	B1	Standard	
Restricted recycle	Unrestricted recycle		
Prescribed Concentration	Prescribed Concentration	Unit	Parameter
75	20	mg/kg	Arsenic (As)
20	1	mg/kg	Cadmium (CD)
1,000	400	mg/kg	Chromium (Cr)

Copper (Cu)	mg/kg	150	1,000
Lead (Pb)	mg/kg	300	750
Mercury (Hg)	mg/kg	1	10
Molybdenum (Mo)	mg/kg	20	75
Nickel (Ni)	mg/kg	60	300
Selenium (Se)	mg/kg	3	50
Zinc (Zn)	mg/kg	300	2500

Table (3-2): Sludge Stabilisation Standards

Option	Measure	Requirement
Treatment System to reduce volatile solids	% VS Reduction across process	> 38
Treatment System to dry raw sludge	% dm in final product	> 95
Treatment System to dry stabilized sludge	% dm in final product	> 75
Treatment System to maintain pH	pH in final product	> 11.5 for 24
<p>- The treated sludge may be used pursuant to the specifications mentioned above to improve the soil used for plant varieties that are used in cosmetic agriculture, windbreak forests, industrial uses or other uses determined by the Competent Authority, with the exception of crops and vegetables that are consumed by humans, provided that the Competent Authority conducts continuous inspection And permanent inspection of that plantings</p> <p>It is forbidden to dispose of sludge in marine structures or water bodies.</p>		General requirements for treated sludge