

Chemical analysis price table/ Water, Environment and Arid Regions Research Centre (WEARRC):

1. Drinking and waste water analysis:

	Analysis	Method and Instrument	Price (JD)	Responsible person	Notes
Physical Property					
1	Colour		10	Eng. Raya Alomoush e.mail: rayalמוש@yahoo.com	
2	Taste		5		
3	Oder		10		
4	Turbidity	Turbidity meter	5		
5	Temperature of Water Source		2		
Chemical Property					
6	Heavy metals * (Iron, Manganese, Nickel, Zinc, Cadmium, Cobalt, Lead, Chromium, Copper, Silver, Aluminium, Barium, Beryllium, Lithium, Molybdenum, Stannous, Vanadium, Boron)	-Inductively Coupled Plasma	10 (Each) 35 (2-5 Element)		
7	Heavy metals* (Iron, Manganese, Nickel, Zinc, Cadmium, Cobalt, Lead, Chromium, Copper, Silver, Aluminium, Barium, , Molybdenum, Magnesium , Sodium, potassium, strontium)	-Atomic Absorption Spectrometer	10 (Each)		
8	Sodium , Potassium , Lithium, calcium, Barium	- Flame Emission Photometer	5 (Each) 20 (whole)		
9	-Calcium - TH	-EDTA Titration	5 5		
10	-Calcium - TH	- Photometer	10 10		



11	-Bromide, Fluoride, Chloride -Nitrite, Nitrate, Phosphate, Sulfate	- Ion Chromatograph	- 10 (Each) - 10 (Each) - 35 (7 anion)		
12	Nitrate	- UV-spectrophotometer	5		
13	Phosphate	- Stannous Chloride method	10		
14	Chloride	- Argentometric method	5		
15	Free Residual Chlorine Cl ₂ (FRC)	- Photometer	5		
16	Sulfate	- Turbidimetric method	10		
17	Alkalinity as CaCO ₃	- Titration method	8		
18	Carbonate	- Titration Method	5		
19	Bicarbonate	- Titration Method	5		
20	Total suspended Solids (TSS)	- Dried at 103-105 °	10		
21	Total Dissolved Solid (TDS)	- Instrumental measurement	2		
22	Total Dissolved Solid (TDS)	- Dried at 180°	10		
23	Chemical Oxygen Demand	- Closed Reflux, Titrimetric	15		
24	Biochemical Oxygen Demand	- 5-Day BOD test	15		
25	Electrical Conductivity	- Conductivity meter	2		
26	PH	- PH-meter	2		
27	Nitrate	- Photometer	10		
28	Total nitrogen	- Photometer	15		
29	Phenol	- Photometer	20		
30	Total organic carbon TOC	- Photometer	20		
31	Ammonium NH ₄ ⁺	- Photometer	10		
32	Ammonium NH ₄ ⁺	- Ion selective electrode	5		
33	Total Coliforms and Escherichia coli	Enzyme Substrate Test (Colilert-IDEXX)	30		
34	Total Coliform Count	- MTF method	15		
35	Escherichia coli	MTF method	15		
36	Fecal Coliforms (Total Thermotolerant Coliform Count-TTCC)	MTF method	15		



37	Pseudomonas aeruginosa	Bacterial Enzyme Detection Technology "Pseudolert" From IDEXX	20		
38	Pseudomonas aeruginosa	MTF method	15		
39	Fungi	Membrane Filtration	15		
40	Free Living Nematodes	Membrane Filtration	15		
41	Algae	Sedimentation Technique	15		
42	Total cost for monthly analysis for drinking water station (Total coliform E.coli, Pseudomonas, Fungi, NO ₃)	Package of test	25		
43	Organo Chlorinated Pesticides (OCPs)-16 compounds **	Solid Phase Extraction / Gas Chromatography/Mass Spectrometer	50		
44	Poly Aromatic Hydrocarbons (PAHs)-16 EPA compounds **	Solid Phase Extraction / Gas Chromatography/Mass Spectrometer	75		
45	Poly Chlorinated Biphenyls (PCBs)-14 congeners **	Solid Phase Extraction / Gas Chromatography/Mass Spectrometer	75		
46	polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs)-17 congeners **	Solid Phase Extraction / Gas Chromatography/Mass Spectrometer	75		

* 15 JD should be added if sample need acid digestion

** 50 JD should be added if sample need extraction and cleaning

	Description	No of samples collected	Destination	Price (JD/Trip/day) vehicle	Price (JD/Trip/day) personnel
				price	price
47	Sampling by lab personnel & vehicle	≤3	Within Mafraq city	20	10
		≥3	Mafraq city	20	20
		≤3	Outside Mafraq city	40	20
		≥3	Mafraq city	40	40



2. Rocks, Minerals and soil analyses:

	Analysis	Method and Instrument	Price (JD)	Responsible person	Notes
48	Elemental Composition	- XRF spectrometer		Eng. Manal Alessa Email: eng_manal_aliss_a13@yahoo.com	
		1. Sample preparation (fusion)	10		
		2. Sample preparation (Milling & crushing)	10		
		3. XRF analysis	30		
49	Metal Composition	- XRD Spectrometer			
		1. Sample preparation (Milling & crushing)	10		
		2. XRD analysis	30		
50	Scanning Electron Microscope Analysis	- Scanning Electron Microscope			
		1. Sample preparation (Coating)	10		
		3. Image (include 5 image)	30		
		for extra image	3		
		4. Chemical analysis (EDAX)	25		
51	Electron Microprobe Analyzer (EMPA)	Electron Microprobe Analyzer			
		1. (Coating)	10		
		2. Thin section	25		
		3. Analysis per hour	50/hour		



3. Organic materials analyses:

	Analysis	Method and Instrument	Price (JD)	Responsible person	Notes
52	Quantitative & Qualitative Analysis of Organic Compounds by: GC/MS	- GC-MS: - without extraction	25	Dr. Mohanad Masad Email: mohanad@aabu.edu.jo	
		-with extraction	50		
53	Quantitative & Qualitative Analysis of Organic Compounds by: MS (DI)	- GC-MS	25		
54	Carbon, Hydrogen, Nitrogen, Sulfur:	- Elemental Analyzer	15		
55	polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzo furans (PCDFs)**	Solid Phase Extraction / Gas Chromatography/Mass Spectrometer	75		
56	Poly Chlorinated Biphenyls (PCBs)**	Solid Phase Extraction / Gas Chromatography/Mass Spectrometer	75		
57	NMR Analysis	- NMR Spectrometer			
		1. H ¹	10		
		2. H ¹ + normal C ¹³	15		
		3. H ¹ +normal C ¹³ +DEPT C ¹³	25		
		4. 2 D experiment	30		
5. cooling	30				

** 50 JD should be added if sample need extraction and cleaning

