

Supplementary Materials

Eco-friendly and efficient monitoring of physico-chemical parameters of some mineral water from Slanic Moldova (Romania) during storage in different conditions – a case study

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Table A. Correlation matrix between the physico-chemical and chemical parameters of natural mineral water from Spring **1bis** glass bottled and stored at 4 °C.

1bis	pH	EC	TDS	SAL	F⁻	Cl⁻	SO₄²⁻	HCO₃⁻	Na⁺	K⁺	Ca²⁺	Mg²⁺
pH	1											
EC	0.829	1										
TDS	0.142	0.671	1									
SAL	0.944	0.966	0.458	1								
F⁻	-0.110	0.463	0.967	0.221	1							
Cl⁻	-0.023	0.538	0.986	0.304	0.996	1						
SO₄²⁻	0	0.558	0.989	0.327	0.993	0.999	1					
HCO₃⁻	0.389	0.837	0.967	0.669	0.872	0.911	0.920	1				
Na⁺	0.785	0.306	-0.500	0.539	-0.701	-0.637	-0.618	-0.263	1			
K⁺	-0.636	-0.958	-0.854	-0.853	-0.696	-0.756	-0.771	-0.958	-0.022	1		
Ca²⁺	-0.447	-0.870	-0.948	-0.715	-0.83	-0.883	-0.894	-0.997	0.201	0.974	1	
Mg²⁺	-0.435	-0.864	-0.953	-0.706	-0.846	-0.889	-0.900	-0.998	0.214	0.971	0.999	1

Table B. Correlation matrix between the physico-chemical and chemical parameters of natural mineral water from Spring **10** glass bottled and stored at 4 °C.

10	pH	EC	TDS	SAL	F⁻	Cl⁻	SO₄²⁻	HCO₃⁻	Na⁺	K⁺	Ca²⁺	Mg²⁺
pH	1											
EC	-0.183	1										
TDS	-0.030	0.988	1									
SAL	-0.226	0.999	0.980	1								
F⁻	-0.648	0.867	0.780	0.887	1							
Cl⁻	0.240	0.910	0.962	0.891	0.582	1						
SO₄²⁻	0	0.982	0.999	0.974	0.760	0.970	1					
HCO₃⁻	-0.444	0.962	0.908	0.973	0.970	0.762	0.895	1				
Na⁺	0.992	-0.058	0.095	-0.101	-0.547	0.360	0.126	-0.328	1			
K⁺	0.431	0.807	0.888	0.781	0.406	0.979	0.902	0.615	0.541	1		
Ca²⁺	0.625	0.652	0.761	0.619	0.188	0.907	0.780	0.421	0.718	0.973	1	
Mg²⁺	0.679	0.596	0.712	0.561	0.117	0.875	0.733	0.354	0.766	0.955	0.997	1

Table C. Correlation matrix between the physico-chemical and chemical parameters of natural mineral water from Spring **14** glass bottled and stored at 4 °C.

14	pH	EC	TDS	SAL	F⁻	Cl⁻	SO₄²⁻	HCO₃⁻	Na⁺	K⁺	Ca²⁺	Mg²⁺
pH	1											
EC	-0.014	1										
TDS	-0.479	0.884	1									
SAL	-0.720	0.703	0.954	1								
F⁻	-0.755	0.665	0.937	0.998	1							
Cl⁻	-0.525	0.858	0.998	0.968	0.954	1						
SO₄²⁻	-0.993	0.125	0.573	0.792	0.823	0.616	1					
HCO₃⁻	-0.500	0.873	0.999	0.960	0.944	0.999	0.592	1				
Na⁺	0.276	0.956	0.710	0.466	0.420	0.672	-0.168	0.693	1			
K⁺	0.509	0.853	0.510	0.229	0.178	0.464	-0.410	0.490	0.967	1		
Ca²⁺	0.551	0.825	0.466	0.180	0.128	0.419	-0.456	0.446	0.954	0.998	1	
Mg²⁺	0.579	0.806	0.437	0.148	0.095	0.389	-0.485	0.416	0.943	0.996	0.999	1

Table D. Correlation matrix between the physico-chemical and chemical parameters of natural mineral water from Spring **15** glass bottled and stored at 4 °C.

15	pH	EC	TDS	SAL	F⁻	Cl⁻	SO₄²⁻	HCO₃⁻	Na⁺	K⁺	Ca²⁺	Mg²⁺
pH	1											
EC	-0.992	1										
TDS	-0.950	0.906	1									
SAL	-0.999	0.995	0.942	1								
F⁻	-0.884	0.934	0.696	0.896	1							
Cl⁻	-1	0.992	0.950	0.999	0.884	1						
SO₄²⁻	0.999	-0.992	-0.951	-0.999	-0.883	-1	1					
HCO₃⁻	-1	0.992	0.950	0.999	0.884	1	-1	1				
Na⁺	-0.984	0.955	0.990	0.979	0.788	0.984	-0.984	0.984	1			
K⁺	0.964	-0.989	-0.834	-0.970	-0.976	-0.964	0.963	-0.964	-0.902	1		
Ca²⁺	0.933	-0.969	-0.775	-0.941	-0.993	-0.933	0.932	-0.933	-0.855	0.995	1	
Mg²⁺	0.940	-0.974	-0.789	-0.949	-0.990	-0.940	0.939	-0.940	-0.866	0.997	0.999	1

Table E. Correlation matrix between the physico-chemical and chemical parameters of natural mineral water from Spring **S2** glass bottled and stored at 4 °C.

S2	pH	EC	TDS	SAL	F⁻	Cl⁻	SO₄²⁻	HCO₃⁻	Na⁺	K⁺	Ca²⁺	Mg²⁺
pH	1											
EC	-0.033	1										
TDS	0.082	0.993	1									
SAL	-0.114	0.996	0.980	1								
F⁻	0.188	0.975	0.994	0.953	1							
Cl⁻	0.490	-0.887	-0.828	-0.921	-0.763	1						
SO₄²⁻	-0.089	-0.992	-0.999	-0.979	-0.994	0.824	1					
HCO₃⁻	0.500	0.848	0.9041	0.802	0.944	-0.509	-0.907	1				
Na⁺	-0.537	-0.824	-0.884	-0.775	-0.929	0.470	0.887	-0.999	1			
K⁺	0.988	-0.181	-0.066	-0.260	0.041	0.6143	0.059	0.366	-0.407	1		
Ca²⁺	0.835	0.521	0.616	0.450	0.697	-0.069	-0.621	0.893	-0.912	0.744	1	
Mg²⁺	0.930	0.335	0.442	0.2581	0.536	0.135	-0.448	0.783	-0.810	0.865	0.978	1