Water Quality Report for Irrigation
EFMA Primary Network

EDIA Empresa de Desenvolvimento e Infra-estruturas do Alqueva, S.A.

Lab results Responsible Laboratory: ALS Life Sciences Portugal, S.A. Parameters	(Bulletin nº 31221/2024) Units	Results	Water Quality for Irrigation (annex XVI, DL n.º 236/98) Conformity
Alkalinity	mg/L CaCO3	114	
Ammonium	mg/L NH4	0,063	
Nitrogen Kjeldahl	mg/L N	0,79	
Total Nitrogen	mg/L N	0,74	
Bicarbonates	mg/L CO3H-	139	(a)
Boron	mg/L B	0,0229	🟢
Calcium	mg/L Ca	34,5	
Chloride	mg/L Cl	53,6	🟢
Total Hardness	mg/L CaCO3	151	
Total Iron (b)	mg/L Fe	0,075	🟢
Phosphates	mg/L P2O5	0,34	
Total Phosphorus	mg/L P	0,15	
Magnesium	mg/L Mg	15,8	
Manganese	mg/L Mn	0,0111	🟢
Nitrates	mg/L NO3	<L.Q. 2	🟢
Nitrites	mg/L NO2	<L.Q. 0,01	
Potassium	mg/L K	6,1	
Ratio of Sodium Absorption (SAR)		1,143	🟢
Ratio of Sodium Absorption adjusted (SARaj)		1,152	
Sodium	mg/L Na	32,3	
Total Dissolved Solids (TDS)	mg/L	284	🟢
Total Suspended Solids (TSS)	mg/L	4,6	🟢
Sulphates	mg/L CO4	39,6	🟢
Total Coliforms	UFC/100 mL	48	
Fecal Coliforms	UFC/100 mL	34	🟢

Note: With the exception of the SARaj parameter, test to determine the remaining parameters are included in the range of laboratory accreditation.

Field Results (Determined with a multiparameter probe) Parameters	Units	Results	Water Quality for Irrigation (annex XVI, DL n.º 236/98) Conformity
Temperature	ºC	14,9	
pH	Escala Sorensen	8,20	🟢
Conductivity	µS/cm	478	🟢

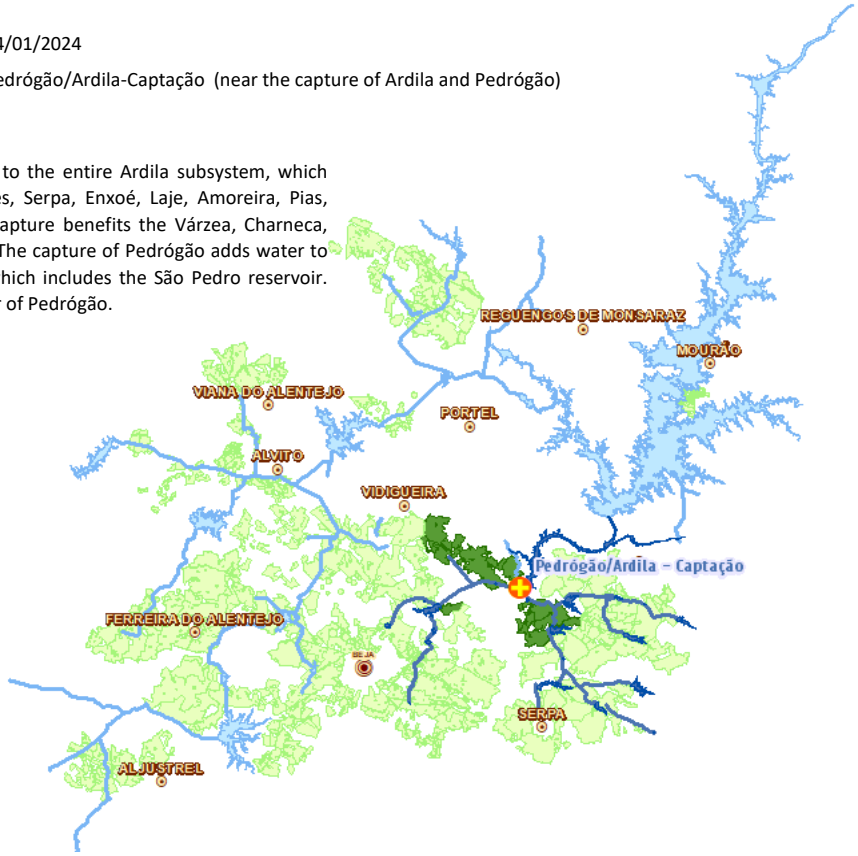
🟢 Lower than the VMR (Maximum Value Recommended)
🟡 Higher than VMR and below the VMA (Maximum Permitted Value)
🔴 Higher than VMR. For this parameter is not defined one VMA.
🔴 Higher than the VMA

(a) The maximum value recommended in the Integrated Production Standards, for most crops, is 90 mg / L.
(b) The VMA in Annex XVI of the Decree-Law nº 236/98 refers to the dissolved iron (5 mg/L Fe).

Sampling Data: 24/01/2024

Sampling Place: Pedrógão/Ardila-Captação (near the capture of Ardila and Pedrógão)

Benefited area:
The capture of Ardila adds water to the entire Ardila subsystem, which includes the reservoirs of Brinches, Serpa, Enxoé, Laje, Amoreira, Pias, Caliços and Furta Galinhas. This capture benefits the Várzea, Charneca, Contendinha and Magoito blocks. The capture of Pedrógão adds water to the entire Pedrógão subsystem, which includes the São Pedro reservoir. This capture benefits the perimeter of Pedrógão.



Comments:
The bicarbonates results exceed the maximum recommended in the Integrated Production Standards. High concentrations of bicarbonates can affect crop yields, making it difficult to absorb some mineral nutrients.
The results of the other parameters are within the ranges of normal values for this type of water bodies.
In the document "Water Quality - Complementary Information", EDIA recommends some general measures to reduce the concentration of salts in the water bodies.