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 196962/2025) Units	 Results	Water Quality for Irrigation (annex XVI, DL n.º 236/98) Conformity
Alkalinity	mg/L CaCO3	166	
Ammonium	mg/L NH4	0,06	
Nitrogen Kjeldahl	mg/L N	0,96	
Total Nitrogen	mg/L N	1,22	
Bicarbonates	mg/L CO3H-	202	(a)
Boron	mg/L B	0,0322	🟢
Calcium	mg/L Ca	51,4	
Chloride	mg/L Cl	65	🟢
Total Hardness	mg/L CaCO3	204	
Dissolved Iron	mg/L Fe	0,065	🟢
Phosphates	mg/L P2O5	0,14	
Total Phosphorus	mg/L P	0,062	
Magnesium	mg/L Mg	18,4	
Manganese	mg/L Mn	0,0773	🟢
Nitrates	mg/L NO3	<L.Q. 2	🟢
Nitrites	mg/L NO2	0,093	
Potassium	mg/L K	6,02	
Ratio of Sodium Absorption (SAR)		1,2	🟢
Ratio of Sodium Absorption adjusted (SARaj)		1,33	
Sodium	mg/L Na	39,4	
Total Dissolved Solids (TDS)	mg/L	346	🟢
Total Suspended Solids (TSS)	mg/L	3,3	🟢
Sulphates	mg/L CO4	37,3	🟢
Total Coliforms	UFC/100 mL	22	
Fecal Coliforms	UFC/100 mL	19	🟢

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	20,3	
pH	Escala Sorensen	7,9	🟢
Conductivity	µS/cm	613	🟢

🟢 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.

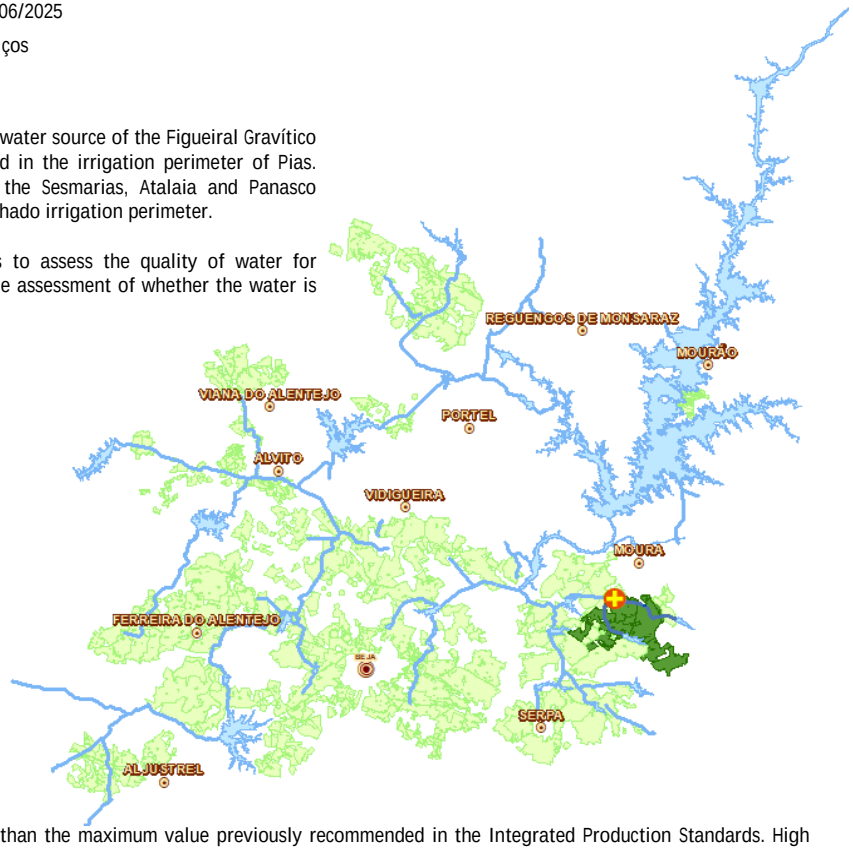
(a) In the Integrated Production Standards, the previously recommended value for bicarbonates, in most crops, was 90 mg/L.

Sampling Data: 06/06/2025

Sampling Place: Caliços

Benefited areas:
The Caliços reservoir constitutes the water source of the Figueiral Gravítico and Pias Gravítico blocks, integrated in the irrigation perimeter of Pias. This reservoir also adds water to the Sesmarias, Atalaia and Panasco blocks, integrated in the Caliços-Machado irrigation perimeter.

The EDIA monitoring program aims to assess the quality of water for irrigation, and does not allow for the assessment of whether the water is suitable for any other use.



Comments:
The bicarbonates results are higher than the maximum value previously 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 remaining elements are within the range of expected values for this typology 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.