

MONITORAGGIO QUALITA delle ACQUE

CALCIO - anno 2019 -

- criterio 3.2.5 ASC Freshwater trout Standard (Appendix IIB) -

DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
14/01/2019	pH	INLET	SINGLE GRAB	YES	YES	7,58
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4,90
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	pH	OUTLET	SINGLE GRAB	YES	YES	7,55
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	4,00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,03
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5,10
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
11/02/2019	pH	INLET	SINGLE GRAB	YES	YES	7,55
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4,60
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	pH	OUTLET	SINGLE GRAB	YES	YES	7,59
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6,00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,02
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5,30
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
11/03/2019	pH	INLET	SINGLE GRAB	YES	YES	7,58
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4,70
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	pH	OUTLET	SINGLE GRAB	YES	YES	7,52
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	4,00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,05
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5,40
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
15/04/2019	pH	INLET	SINGLE GRAB	YES	YES	7,51
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4,80
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	pH	OUTLET	SINGLE GRAB	YES	YES	7,56
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	4,00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,08
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5,40
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,01

DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
20/05/2019	pH	INLET	SINGLE GRAB	YES	YES	7.55
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4.60
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.48
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.06
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.80
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
17/06/2019	pH	INLET	SINGLE GRAB	YES	YES	7.48
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4.90
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.55
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	8.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.09
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.70
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
15/07/2019	pH	INLET	SINGLE GRAB	YES	YES	7.50
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.010
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4.70
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.010
	pH	OUTLET	SINGLE GRAB	YES	YES	7.59
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	8.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.080
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.80
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
19/08/2019	pH	INLET	SINGLE GRAB	YES	YES	7.59
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	2.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.02
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4.90
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.5
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.08
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.60
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
19/08/2019	pH	INLET	SINGLE GRAB	YES	YES	7.59
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	2.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.02
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4.90
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.5
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.08
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.60
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.01

DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
14/10/2019	pH	INLET	SINGLE GRAB	YES	YES	7.50
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4.80
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.57
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.08
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.60
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
18/11/2019	pH	INLET	SINGLE GRAB	YES	YES	7.53
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4.60
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.5
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	3.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.05
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.80
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.01
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
16/12/2019	pH	INLET	SINGLE GRAB	YES	YES	7.51
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	4.70
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.48
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	2.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.02
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.90
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.01

SATURAZIONE MINIMA di OSSIGENO DISCIOLTO

CALCIO - anno 2019 -

- criterio 3.2.2 ASC Freshwater trout Standard (Appendix IIB) -

ACQUA IN USCITA VASCHE ALLEVAMENTO

MESE	DATA RILEVAZIONE	OSSIGENO DISCIOLTO [mg/l]	TEMPERATURA	PRESSIONE [mmHg]	VALORE SATURAZIONE DI O ₂ [mg/l]	SATURAZIONE PERCENTUALE [%]
GENNAIO	14/01/2019	10,7	9,9	748,52	11,03	97,01
FEBBRAIO	11/02/2019	10,7	9,7	748,52	11,09	96,48
MARZO	11/03/2019	10,5	9,9	748,52	11,03	95,19
APRILE	15/04/2019	10,2	10,2	748,52	11,07	92,14
MAGGIO	20/05/2019	10,1	10,5	748,52	11,10	91,03
GIUGNO	17/06/2019	10,1	10,9	748,52	10,89	92,75
LUGLIO	15/07/2019	9,9	11,2	748,52	10,81	91,58
AGOSTO	19/08/2019	9,8	11,8	748,52	10,67	91,85
SETTEMBRE	16/09/2019	9,9	11,6	748,52	10,72	92,35
OTTOBRE	14/10/2019	10,2	11,2	748,52	11,07	92,14
NOVEMBRE	18/11/2019	10,5	10,7	748,52	11,03	95,19
DICEMBRE	16/12/2019	10,9	10,1	748,52	10,91	99,91

La % di saturazione di OD (concentrazione di ossigeno disciolto; in inglese DO) è data dal rapporto, in % appunto, tra l'effettiva quantità di OD e il massimo valore possibile in funzione della temperatura e dell'altitudine.

Altitudine CALCIO= 123m.

Pressione in funzione dell'altitudine: $p = 0,9877^q$; dove P=pressione in atm - q=altitudine in centinaia di metri (nel caso di CALCIO q=1,23), da cui $p = 0,984892 \text{ atm}$ (748,52mm di Hg)

Dalla Tabella allegata si ottengono i valori di saturazione di O₂

	°C	740mm	750mm	748,52mm	valore saturazione
temperatura più bassa	9	11,12	11,5	11,29936	13,99936
temperatura più alta	10	10,82	11,2	10,99936	
temperatura rilevata					
temperatura più bassa	10	11,05	11,2	11,1208	13,668
temperatura più alta	11	10,8	10,94	10,86608	
temperatura rilevata					
temperatura più bassa	11	10,8	10,94	10,86608	13,50608
temperatura più alta	12	10,56	10,7	10,62608	
temperatura rilevata					
temperatura più bassa	12	10,56	10,7	10,62608	13,50608
temperatura più alta	13	10,32	10,46	10,38608	
temperatura rilevata					