

WATER EXCURSION

Master Program of Water Technology

Introduction :

The aim of this excursion was to investigate the ecological condition of the water bodies in Southwest Germany

Methodology:

In situ measurements using Probes, Multimeter, Test strips and Ex situ measurements using Spectrophotometer.

Results:

Water Karst Excursion 2021									
	Samples	Temp	pH	Cond	DO	SO ₄ ⁻²	NO ₃	PO ₄ ⁻	COD
1	Rutschenbrünnele	11	7.21	555	5.51	73.5	4.16	0.147	154
2	Aachquelle	14	7.29	468	7.58	70.7	3.81	0.137	169
3	Danube river	22.9	7.08	815	7.9	70.2	2.73	0.372	1729
4	Schluchseel	18	7.33	993	8.19	70.1	1.01	0.187	2055
5	Reinfall 1	BDL	-	BDL	BDL	69.6	1.27	0.253	BDL
6	Center of Caves	16.7	7.16	581	9.5	68.8	7.6	0.331	4139
7	Inside the caves	BDL	-	BDL	BDL	68.4	5.3	0.154	BDL
8	Entarance of caves	BDL	-	BDL	BDL	69.7	2.55	0.277	BDL
9	Jagerhouse	14	8.16	423	90	71.3	2.76	0.157	4486
10	Donauquelle	BDL	-	BDL	BDL	77.5	3.48	0.198	BDL
11	Fall Water	14.6	8.04	589	9.74	68.8	2.65	0.137	BDL
12	Mossigen	15	7.4	767	2.85	134	0.519	BDL	179
13	Upstream water fall	BDL	-	BDL	BDL	68.9	4.95	0.194	BDL
14	Reinfall 2	18	8.38	356	9.977	71.3	1.03	0.148	124

*BDL: Below Detection limits, Temp: Temperature in degree Celsius, Cond: Conductivity in µS/cm, DO: Dissolved oxygen in mg/L, SO₄⁻²: Sulphate in mg/L, NO₃: Nitrite in mg/L, PO₄⁻: Phosphates in mg/L, COD: chemical oxygen demand in mg/L, Chro: Chromium in mg/L

Water Karst Excursion 2022											
	Samples	Temp	pH	Cond	DO	TDS	Turb	Sal	NO ₃	SO ₄ ⁻²	Chro
1	Boat shed	20.1	8.03	412	7.68	293	0.25	BDL	2.19	83	0.013
2	Danube sink hole	25.9	8.77	807	16.52	585	BDL	0.24	15	87.5	0.018
3	Jägerhaus	22.6	8.24	561	7.35	399	BDL	0.28	2.92	80.5	0.026
4	Pfuhler See	26.1	8.41	585	12.92	411	BDL	0.29	1.16	85.5	0.018
5	Danub neu ulm	21.5	8.33	587	8.4	418	BDL	0.29	3.82	81.8	0.02
6	Dischingen lake	12.8	7.42	615	9.61	442	BDL	0.32	10.9	79.3	0.021
7	Ega lake	12.9	7.65	599	9.86	427	BDL	0.28	8.44	79.8	0.018
8	Karst water	16.7	7.41	619	BDL	443	BDL	0.32	10.9	79.4	0.017
9	karst and donau	16.7	7.32	892	BDL	583	BDL	0.45	11.4	90.8	0.019

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Fig .1. Water Karst Excursion 2021



Fig .2. Water Karst Excursion 2022

Conclusion:

Overall ecological condition of the water bodies in southwest Germany was found to be in good ecological condition

References:

Chemical Quality Standards and Assessment." Umltbundesamt. <https://www.umltbundesamt.de/en/topics/water/rivers/assessment-of-watercourses/chemical-quality-standards-assessment>

