

**Trinkwasseranalyse
Freiburg im Breisgau**

Versorgungsbereich	Einheit	1	2	3	4	Grenzwert*
Mikrobiologische Parameter						
<i>Escherichia coli</i>	Anzahl/ 100 ml	0	0	0	0	0
Coliforme Bakterien	Anzahl/ 100 ml	0	0	0	0	0
Enterokokken	Anzahl/ 100 ml	0	0	0	0	0
Koloniezahl bei 22 °C	Anzahl/ 1 ml	0	0	0	0	100
Koloniezahl bei 36 °C	Anzahl/ 1 ml	0	0	0	0	100
Phys.-chem. Untersuchungen nach Anlage 2, Teil I TrinkwV						
Benzol	µg/L	< BG	< BG	< BG	< BG	1
Bor	mg/L	< BG	< BG	< BG	< BG	1
Bromat	µg/L	< BG	< BG	< BG	< BG	10
Chrom	mg/L	< BG	< BG	< BG	< BG	0,025
Cyanid, gesamt	mg/L	< BG	< BG	< BG	< BG	0,05
Fluorid	mg/L	< BG	< BG	< BG	0,23	1,5
Nitrat	mg/L	12,8	3,8	4,3	22,4	50
Quecksilber	mg/L	< BG	< BG	< BG	< BG	0,001
Selen	mg/L	< BG	< BG	< BG	< BG	0,01
Uran	mg/L	< BG	< BG	0,0001	0,0007	0,01
Leichtflüchtige Halogenkohlenwasserstoffe						
1,2-Dichlorethan	µg/L	< BG	< BG	< BG	< BG	3
Tetrachlorethen	µg/L	< BG	< BG	< BG	< BG	-
Trichlorethen	µg/L	< BG	< BG	< BG	< BG	-
Summe Tri- und Tetrachlorethen	µg/L	0	0	0	0	10
Dichlormethan	µg/L	< BG	< BG	< BG	< BG	-
Tetrachlormethan (Tetrachlorkohlenstoff)	µg/L	< BG	< BG	< BG	< BG	-
1,1,1-Trichlorethan	µg/L	< BG	< BG	< BG	< BG	-
cis-1,2-Dichlorethen	µg/L	< BG	< BG	< BG	< BG	-
trans-1,2-Dichlorethen	µg/L	< BG	< BG	< BG	< BG	-
1,1-Dichlorethan	µg/L	< BG	< BG	< BG	< BG	-
1,1-Dichlorethen	µg/L	< BG	< BG	< BG	< BG	-
1,1,2-Trichlortrifluorethan	µg/L	< BG	< BG	< BG	< BG	-
Pflanzenschutzmittel-Wirkstoffe und Metabolite						
2,4,5-T	µg/L	< BG	< BG	< BG	< BG	0,1
2,4,5-TP (Fenoprop)	µg/L	< BG	< BG	< BG	< BG	0,1
2,4-D	µg/L	< BG	< BG	< BG	< BG	0,1
2,4-DB	µg/L	< BG	< BG	< BG	< BG	0,1
2,4-DP (Dichlorprop)	µg/L	< BG	< BG	< BG	< BG	0,1
Dichlorbenzamid (Metabolit)	µg/L	< BG	< BG	< BG	< BG	3
Alachlor	µg/L	< BG	< BG	< BG	< BG	0,1
Ametryn	µg/L	< BG	< BG	< BG	< BG	0,1
Atrazin	µg/L	< BG	< BG	< BG	< BG	0,1

* nach Trinkwasserverordnung vom 20.06.2023
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Desethylatrazin (Metabolit)	µg/L	0,01	< BG	< BG	0,012	0,1
Bentazon	µg/L	< BG	< BG	< BG	< BG	0,1
Bixafen-M44	µg/l	< BG	< BG	< BG	< BG	0,1
Bromacil	µg/L	< BG	< BG	< BG	< BG	0,1
Bromoxynil	µg/L	< BG	< BG	< BG	< BG	0,1
Captan THPI	µg/l	< BG	< BG	< BG	< BG	0,1
Carbetamid	µg/L	< BG	< BG	< BG	< BG	0,1
Carfentrazon-ethyl BA	µg/l	< BG	< BG	< BG	< BG	0,1
Chloridazon	µg/L	< BG	< BG	< BG	< BG	0,1
Chlorthalonil-R 417888/M12	µg/L	< BG	< BG	< BG	0,049	0,1
Chlorthalonil-R 419492/M8	µg/l	< BG	< BG	< BG	< BG	0,1
Chlorthalonil-R 471811/M4	µg/l	0,026	< BG	< BG	0,38	3
Chlortoluron	µg/L	< BG	< BG	< BG	< BG	0,1
Chlortoluron-BA	µg/l	< BG	< BG	< BG	< BG	0,1
Cyanazin	µg/L	< BG	< BG	< BG	< BG	0,1
Cyflufenamid Metabolit 149-F6	µg/l	< BG	< BG	< BG	< BG	0,1
Desmetryn	µg/L	< BG	< BG	< BG	< BG	0,1
Dicamba	µg/L	< BG	< BG	< BG	< BG	0,1
Dimethachlor-CGA 354742	µg/L	< BG	< BG	< BG	< BG	0,1
Dimethachlor-CGA 369873	µg/L	< BG	< BG	< BG	< BG	0,1
Dimoxystrobin-505/M08	µg/L	< BG	< BG	< BG	< BG	0,1
Dimoxystrobin-505/M09	µg/L	< BG	< BG	< BG	< BG	0,1
Diuron	µg/L	< BG	< BG	< BG	< BG	0,1
Fluroxypyr	µg/L	< BG	< BG	< BG	< BG	0,1
Hexazinon	µg/L	< BG	< BG	< BG	< BG	0,1
Ioxynil	µg/L	< BG	< BG	< BG	< BG	0,1
Isoproturon	µg/L	< BG	< BG	< BG	< BG	0,1
Lenacil	µg/L	< BG	< BG	< BG	< BG	0,1
Linuron	µg/L	< BG	< BG	< BG	< BG	0,1
MCPA	µg/L	< BG	< BG	< BG	< BG	0,1
MCPB	µg/L	< BG	< BG	< BG	< BG	0,1
MCPP (Mecoprop)	µg/L	< BG	< BG	< BG	< BG	0,1
Metalaxyl	µg/L	< BG	< BG	< BG	< BG	0,1
Metamitron	µg/L	< BG	< BG	< BG	< BG	0,1
Metazachlor	µg/L	< BG	< BG	< BG	< BG	0,1
Methabenzthiazuron	µg/L	< BG	< BG	< BG	< BG	0,1
Metobromuron	µg/L	< BG	< BG	< BG	< BG	0,1
Metoxuron	µg/L	< BG	< BG	< BG	< BG	0,1
Metribuzin	µg/L	< BG	< BG	< BG	< BG	0,1
Monolinuron	µg/L	< BG	< BG	< BG	< BG	0,1
Nicosulfuron-ASDM	µg/l	< BG	< BG	< BG	< BG	0,1
Nicosulfuron-AUSN	µg/l	< BG	< BG	< BG	< BG	0,1
Nicosulfuron-UCSN	µg/l	< BG	< BG	< BG	< BG	0,1
Pendimethalin	µg/L	< BG	< BG	< BG	< BG	0,1
Phenmedipham	µg/L	< BG	< BG	< BG	< BG	0,1
Procymidon	µg/L	< BG	< BG	< BG	< BG	0,1
Prometryn	µg/L	< BG	< BG	< BG	< BG	0,1
Propachlor	µg/L	< BG	< BG	< BG	< BG	0,1
Propazin	µg/L	< BG	< BG	< BG	< BG	0,1
Quinmerac-BH 518-2	µg/L	< BG	< BG	< BG	< BG	0,1

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Quinmerac-BH 518-5	µg/l	< BG	< BG	< BG	< BG	0,1
Sebuthylazin	µg/L	< BG	< BG	< BG	< BG	0,1
Simazin	µg/L	< BG	< BG	< BG	< BG	0,1
Desethylsimazin (Metabolit)	µg/L	< BG	< BG	< BG	< BG	0,1
Metolachlor	µg/L	< BG	< BG	< BG	< BG	0,1
S-Metolachlor-CGA 351916/CGA 51202	µg/L	< BG	< BG	< BG	< BG	0,1
S-Metolachlor-CGA 380168/CGA 354743	µg/L	< BG	< BG	< BG	< BG	0,1
S-Metolachlor-NOA 413173	µg/L	< BG	< BG	< BG	< BG	0,1
Sulcotrion-CMBA	µg/l	< BG	< BG	< BG	< BG	0,1
Terbuthylazin	µg/L	< BG	< BG	< BG	< BG	0,1
Desethylterbuthylazin (Metabolit)	µg/L	< BG	< BG	< BG	< BG	-
Terbuthylazin-LM4	µg/l	< BG	< BG	< BG	< BG	0,1
Terbuthylazin-MT13	µg/l	< BG	< BG	< BG	< BG	0,1
Terbuthylazin-MT14	µg/l	< BG	< BG	< BG	< BG	0,1
Terbuthylazin-MT23	µg/l	< BG	< BG	< BG	< BG	0,1
Terbuthylazin-SYN 545666/SM6	µg/l	< BG	< BG	< BG	< BG	0,1
Terbutryn	µg/L	< BG	< BG	< BG	< BG	0,1
Triadimefon	µg/L	< BG	< BG	< BG	< BG	0,1
Triadimenol	µg/L	< BG	< BG	< BG	< BG	0,1
Triallat	µg/L	< BG	< BG	< BG	< BG	0,1
Triclopyr	µg/L	< BG	< BG	< BG	< BG	0,1
Trifluralin	µg/L	< BG	< BG	< BG	< BG	0,1
Summe PSM	µg/l	0,01	< BG	< BG	0,012	0,5
Phys.-chem. Untersuchungen nach Anlage 2, Teil II TrinkwV						
Antimon	mg/L	< BG	< BG	< BG	< BG	0,005
Arsen	mg/L	< BG	< BG	< BG	< BG	0,01
Bisphenol A	µg/L	< BG	< BG	< BG	< BG	2,5
Blei	mg/L	< BG	< BG	< BG	< BG	0,01
Cadmium	mg/L	< BG	< BG	0,0001	< BG	0,003
Kupfer	mg/L	< BG	< BG	< BG	< BG	2
Nickel	mg/L	< BG	< BG	< BG	< BG	0,02
Nitrit	mg/L	< BG	< BG	< BG	< BG	0,5
<i>Polyfluorierte Verbindungen (PFAS)</i>						
Perfluorbutanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluorpentanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluorhexanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluorheptanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluoroctanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluornonanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluordecanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluorundecanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluordodecanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluortridecanoat	µg/L	< BG	< BG	< BG	< BG	-
Perfluorbutansulfonat	µg/L	< BG	< BG	< BG	< BG	-
Perfluorpentansulfonat	µg/L	< BG	< BG	< BG	< BG	-
Perfluorhexansulfonat	µg/L	< BG	< BG	< BG	< BG	-
Perfluorheptansulfonat	µg/L	< BG	< BG	< BG	< BG	-
Perfluoroctansulfonat	µg/L	< BG	< BG	< BG	< BG	-
Perfluornonansulfonat	µg/L	< BG	< BG	< BG	< BG	-
Perfluordecansulfonat	µg/L	< BG	< BG	< BG	< BG	-

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Perfluorundecansulfonat	µg/L	< BG	< BG	< BG	< BG	-
Perfluordodecansulfonat	µg/L	< BG	< BG	< BG	< BG	-
Perfluortridecansulfonat	µg/L	< BG	< BG	< BG	< BG	-
TFA (Trifluoracetat)	µg/l	0,81	0,82	0,62	1,2	10
Summe PFAS-20	µg/L	0	0	0	0	0,1
Summe PFAS-4	µg/L	0	0	0	0	0,02
<i>Polycyclische aromatische Kohlenwasserstoffe (PAK)</i>						
Acenaphthen	µg/L	< BG	< BG	< BG	< BG	-
Acenaphthylen	µg/L	< BG	< BG	< BG	< BG	-
Anthracen	µg/L	< BG	< BG	< BG	< BG	-
Benzo(a)anthracen	µg/L	< BG	< BG	< BG	< BG	-
Benzo(a)pyren	µg/L	< BG	< BG	< BG	< BG	0,01
Benzo(b)fluoranthren	µg/L	< BG	< BG	< BG	< BG	-
Benzo(ghi)perylene	µg/L	< BG	< BG	< BG	< BG	-
Benzo(k)fluoranthren	µg/L	< BG	< BG	< BG	< BG	-
Chrysen	µg/L	< BG	< BG	< BG	< BG	-
Dibenz(ah)anthracen	µg/L	< BG	< BG	< BG	< BG	-
Fluoranthren	µg/L	< BG	< BG	< BG	< BG	-
Fluoren	µg/L	< BG	< BG	< BG	< BG	-
Indeno(1,2,3-cd)pyren	µg/L	< BG	< BG	< BG	< BG	-
Naphthalin	µg/L	< BG	< BG	< BG	< BG	-
Phenanthren	µg/L	< BG	< BG	< BG	< BG	-
Pyren	µg/L	< BG	< BG	< BG	< BG	-
Summe 4 PAK TrinkwV 2023	µg/L	0	0	0	0	0,1
Phys.-chem. Untersuchungen nach Anlage 3 TrinkwV						
Färbung, qualitativ	-	ohne	ohne	ohne	ohne	ohne
Trübung, qualitativ	-	ohne	ohne	ohne	ohne	ohne
Geruch, qualitativ	-	ohne	ohne	ohne	ohne	ohne
Färbung, 436 nm	1/m	< BG	< BG	< BG	< BG	0,5
Trübung, quantitativ	FNU	0,12	0,16	0,19	0,15	-
Trübung, quantitativ (anges.)	FNU	-	-	-	-	-
Fassungstemperatur	°C	10,5	10,9	7	11,6	-
Elektr. Leitfähigkeit bei 25°C	µS/cm	247	195	104	489	2790
pH-Wert, Labor	-	7,93	8,07	8,19	7,39	≥ 6,5 ≤ 9,5
pH-Wert bei Fassungstemperatur	-	8,02	8,12	8,38	7,46	≥ 6,5 bis ≤ 9,5
pH-Wert nach Calcitsättigung b. Fassungstemp.	-	8,11	8,41	8,75	7,44	-
pH-Wertabweichung vom Gleichgewicht	-	-0,09	-0,29	-0,37	0,02	-
Säurekapazität bis pH 4,3	mmol/L	1,68	1,11	0,87	3,61	-
Säurekapazität bis pH 8,2	mmol/L	-	-	-	-	-
Basekapazität bis pH 4,3	mmol/L	-	-	-	-	-
Basekapazität bis pH 8,2	mmol/L	0,016	0,012	< BG	0,29	-
Gesamthärte	mmol/L	0,94	0,64	0,41	2,26	-
Gesamthärte °dH	°dH	5,3	3,6	2,3	12,7	-
Sättigungsindex	-	-0,1	-0,31	-0,4	0,03	-
Calcitlösekapazität	mg/L	1	2	2	< BG	10
Calcitabscheidekapazität	mg/L	< BG	< BG	< BG	2	-
Calcium	mg/L	31,6	22,5	14,4	78,5	-
Magnesium	mg/L	3,8	1,8	1,2	7,4	-
Natrium	mg/L	9,5	11	3,4	9,7	200

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Kalium	mg/L	1,8	0,7	0,5	1,5	-
Ammonium	mg/L	< BG	< BG	< BG	< BG	0,5
Eisen	mg/L	< BG	< BG	< BG	< BG	0,2
Mangan	mg/L	< BG	< BG	< BG	< BG	0,05
Aluminium	mg/L	< BG	< BG	< BG	< BG	0,2
Aluminium, gelöst	mg/L	-	-	-	-	0,2
Chlorid	mg/L	13,1	20,2	1,1	19,3	250
Sulfat	mg/L	9,4	5,5	4,5	23,7	250
TOC	mg/L	0,69	0,49	0,41	0,45	ohne anorm. Veränderung
SAK, 254 nm	1/m	0,7	0,5	0,4	0,5	-
Phosphat, gesamt	mg/L	0,04	0,07	0,1	0,11	-
Sauerstoff, iodometrisch	mg/L	9,7	13,4	13	7,5	-
Pharmaka						
Amidotrizoesäure	µg/l	< BG	< BG	< BG	< BG	-
Amoxicillin	µg/l	< BG	< BG	< BG	< BG	-
Atenolol	µg/l	< BG	< BG	< BG	< BG	-
Azithromycin	µg/l	< BG	< BG	< BG	< BG	0,3
Betaxolol	µg/l	< BG	< BG	< BG	< BG	-
Bezafibrat	µg/l	< BG	< BG	< BG	< BG	-
Bisoprolol	µg/l	< BG	< BG	< BG	< BG	-
Carbamazepin	µg/l	< BG	< BG	< BG	< BG	0,3
Chloramphenicol	µg/l	< BG	< BG	< BG	< BG	-
Chlortetracyclin	µg/l	< BG	< BG	< BG	< BG	-
Ciprofloxacin	µg/l	< BG	< BG	< BG	< BG	-
Clarithromycin	µg/l	< BG	< BG	< BG	< BG	-
Clindamycin	µg/l	< BG	< BG	< BG	< BG	-
Clenbuterol	µg/l	< BG	< BG	< BG	< BG	-
Clofibrinsäure	µg/l	< BG	< BG	< BG	< BG	-
Cloxacillin	µg/l	< BG	< BG	< BG	< BG	-
Cyclophosphamid	µg/l	< BG	< BG	< BG	< BG	-
Dapson	µg/l	< BG	< BG	< BG	< BG	-
Dehydrato-Erythromycin A	µg/l	< BG	< BG	< BG	< BG	-
Diazepam	µg/l	< BG	< BG	< BG	< BG	-
Diclofenac	µg/l	< BG	< BG	< BG	< BG	0,3
Dicloxacillin	µg/l	< BG	< BG	< BG	< BG	-
Dimethylaminophenazon	µg/l	< BG	< BG	< BG	< BG	-
Doxycyclin	µg/l	< BG	< BG	< BG	< BG	-
Enoxacin	µg/l	< BG	< BG	< BG	< BG	-
Enrofloxacin	µg/l	< BG	< BG	< BG	< BG	-
Etofibrat	µg/l	< BG	< BG	< BG	< BG	-
Fenofibrat	µg/l	< BG	< BG	< BG	< BG	-
Fenofibrinsäure	µg/l	< BG	< BG	< BG	< BG	-
Fenoprofen	µg/l	< BG	< BG	< BG	< BG	-
Furazolidon	µg/l	< BG	< BG	< BG	< BG	-
Gemfibrozil	µg/l	< BG	< BG	< BG	< BG	-
Guanylharnstoff	µg/l	< BG	< BG	< BG	< BG	-
Ibuprofen	µg/l	< BG	< BG	< BG	< BG	-
Ifosfamid	µg/l	< BG	< BG	< BG	< BG	-
Indomethacin	µg/l	< BG	< BG	< BG	< BG	-

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Iodipamid	µg/l	< BG	< BG	< BG	< BG	-
Iohexol	µg/l	< BG	< BG	< BG	< BG	-
Iomeprol	µg/l	< BG	< BG	< BG	< BG	-
Iopamidol	µg/l	< BG	< BG	< BG	< BG	-
Iopromid	µg/l	< BG	< BG	< BG	< BG	-
Iotalaminsäure	µg/l	< BG	< BG	< BG	< BG	-
Ioxaglinsäure	µg/l	< BG	< BG	< BG	< BG	-
Ioxithalaminsäure	µg/l	< BG	< BG	< BG	< BG	-
Ketoprofen	µg/l	< BG	< BG	< BG	< BG	-
Meclocyclin	µg/l	< BG	< BG	< BG	< BG	-
Metformin	µg/l	< BG	< BG	< BG	< BG	-
Metoprolol	µg/l	< BG	< BG	< BG	< BG	-
Metronidazol	µg/l	< BG	< BG	< BG	< BG	-
Nafcillin	µg/l	< BG	< BG	< BG	< BG	-
Naproxen	µg/l	< BG	< BG	< BG	< BG	-
Norfloxacin	µg/l	< BG	< BG	< BG	< BG	-
Ofloxacin	µg/l	< BG	< BG	< BG	< BG	-
Oleandomycin	µg/l	< BG	< BG	< BG	< BG	-
Oxacillin	µg/l	< BG	< BG	< BG	< BG	-
Oxytetracyclin	µg/l	< BG	< BG	< BG	< BG	-
Penicillin G	µg/l	< BG	< BG	< BG	< BG	-
Penicillin V	µg/l	< BG	< BG	< BG	< BG	-
Pentoxifyllin	µg/l	< BG	< BG	< BG	< BG	-
Phenacetin	µg/l	< BG	< BG	< BG	< BG	-
Phenazon	µg/l	< BG	< BG	< BG	< BG	0,3
Pindolol	µg/l	< BG	< BG	< BG	< BG	-
Propranolol	µg/l	< BG	< BG	< BG	< BG	-
Propyphenazon	µg/l	< BG	< BG	< BG	< BG	0,3
Ronidazol	µg/l	< BG	< BG	< BG	< BG	-
Roxithromycin	µg/l	< BG	< BG	< BG	< BG	-
Salbutamol	µg/l	< BG	< BG	< BG	< BG	-
Simvastatin	µg/l	< BG	< BG	< BG	< BG	-
Sotalol	µg/l	< BG	< BG	< BG	< BG	-
Spiramycin	µg/l	< BG	< BG	< BG	< BG	-
Sulfadiazin	µg/l	< BG	< BG	< BG	< BG	-
Sulfadimidin	µg/l	< BG	< BG	< BG	< BG	-
Sulfamerazin	µg/l	< BG	< BG	< BG	< BG	-
Sulfamethoxazol	µg/l	< BG	< BG	< BG	< BG	-
Terbutalin	µg/l	< BG	< BG	< BG	< BG	-
Tetracyclin	µg/l	< BG	< BG	< BG	< BG	-
Trimethoprim	µg/l	< BG	< BG	< BG	< BG	-
Tylosin	µg/l	< BG	< BG	< BG	< BG	-
Untersuchungsdatum	-	18.03.2025	18.03.2025	18.03.2025	18.03.2025	-

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