

Brooks Rand Labs Detection & Reporting Limits

Biota

<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
%TS	SM 2540G	0.30	1.00	%
Ag	EPA 1638	0.020	0.100	mg/kg
Al	EPA 1638	0.14	0.80	mg/kg
As	EPA 1638	0.11	0.30	mg/kg
As	EPA 1638 DRC	0.014	0.040	mg/kg
As(III)	EPA 1632	0.004	0.010	mg/kg
As(Inorg)	EPA 1632	0.004	0.010	mg/kg
As(Org)	EPA 1638	0.05	0.16	mg/kg
As(Org)	EPA 1638 DRC	0.014	0.040	mg/kg
As(V)	EPA 1632	0.004	0.010	mg/kg
B	EPA 1638	0.24	0.80	mg/kg
Ba	EPA 1638	0.03	0.16	mg/kg
Be	EPA 1638	0.030	0.090	mg/kg
Ca	EPA 1638	8.00	30.0	mg/kg
Cd	EPA 1638	0.007	0.020	mg/kg
Co	EPA 1638	0.020	0.160	mg/kg
Cr	EPA 1638	0.06	0.15	mg/kg
Cr	EPA 1638 DRC	0.018	0.120	mg/kg
Cu	EPA 1638	0.03	0.16	mg/kg
DMAs	EPA 1632	0.004	0.012	mg/kg
Fe	EPA 1638	1.2	5.0	mg/kg
Fe	EPA 1638 DRC	0.08	0.80	mg/kg
Hg	EPA 1631 Appendix	0.12	0.40	ng/g
Hg (low level)	EPA 1631 Appendix	0.04	0.10	ng/g
K	EPA 1638	1.5	4.5	mg/kg
Li	EPA 1638	0.025	0.120	mg/kg
MeHg	EPA 1630	1.00	3.00	ng/g
MeHg (low level)	EPA 1630	0.07	0.20	ng/g
Mg	EPA 1638	0.30	2.50	mg/kg
MMAs	EPA 1632	0.004	0.012	mg/kg
Mn	EPA 1638	0.012	0.040	mg/kg
Mo	EPA 1638	0.010	0.030	mg/kg
Na	EPA 1638	7.0	20.0	mg/kg
Ni	EPA 1638	0.05	0.20	mg/kg
Ni	EPA 1638 DRC	0.05	0.20	mg/kg
Pb	EPA 1638	0.004	0.040	mg/kg
Sb	EPA 1638	0.007	0.020	mg/kg
Se	EPA 1638	0.12	0.30	mg/kg
Se	EPA 1638 DRC	0.06	0.15	mg/kg
Se(IV)	SOP BR-0061 HPLC	0.050	0.200	mg/kg
Se(VI)	SOP BR-0061 HPLC	0.050	0.200	mg/kg
Sn	EPA 1638	0.020	0.150	mg/kg
Sr	EPA 1638	0.008	0.070	mg/kg
Ti	EPA 1638	0.07	0.25	mg/kg

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* For ICP-MS analyses, Industrial waste water (i.e. FGD) will most always be diluted 50x, Blood samples will be diluted 50x, and Urine samples will be diluted 10x.

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<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
TI	EPA 1638	0.002	0.008	mg/kg
U	EPA 1638	0.008	0.025	mg/kg
V	EPA 1638	0.06	0.18	mg/kg
V	EPA 1638 DRC	0.014	0.120	mg/kg
Zn	EPA 1638	0.20	1.00	mg/kg

Sediment

<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
%TS	SM 2540G	0.30	1.00	%
Ag	EPA 1638	0.042	0.100	mg/kg
Al	EPA 1638	1.00	5.00	mg/kg
As	EPA 1632	0.010	0.030	mg/kg
As	EPA 1638	0.48	1.30	mg/kg
As	EPA 1638 DRC	0.05	0.36	mg/kg
As(III)	EPA 1632	0.040	0.120	mg/kg
As(Inorg)	EPA 1632	0.004	0.010	mg/kg
As(Org)	EPA 1638 DRC	0.05	0.36	mg/kg
As(V)	EPA 1632	0.040	0.120	mg/kg
Au	EPA 1638	0.05	0.15	mg/kg
B	EPA 1638	2.40	7.50	mg/kg
Ba	EPA 1638	0.11	1.00	mg/kg
Be	EPA 1638	0.24	0.72	mg/kg
Ca	EPA 1638	30.0	150	mg/kg
Cd	EPA 1638	0.023	0.070	mg/kg
Co	EPA 1638	0.06	0.50	mg/kg
Cr	EPA 1638	0.63	2.00	mg/kg
Cr	EPA 1638 DRC	0.16	1.00	mg/kg
Cu	EPA 1638	0.17	0.50	mg/kg
Cu	EPA 1638 DRC	0.49	2.50	mg/kg
DMAs	EPA 1632	0.005	0.015	mg/kg
Fe	EPA 1638	4.8	25.0	mg/kg
Fe	EPA 1638 DRC	4.2	25.0	mg/kg
Hg	EPA 1631 Appendix	0.15	0.50	ng/g
Hg (low level)	EPA 1631 Appendix	0.05	0.15	ng/g
Hg(Extnorg)	EPA 3200	0.25	0.75	ng/g
Hg(ExtOrg)	EPA 3200	0.05	0.15	ng/g
Hg(F0)	SOP BR-0013	50.0	50.0	ng/g
Hg(F1)	SOP BR-0013	0.20	0.50	ng/g
Hg(F2)	SOP BR-0013	0.20	0.50	ng/g
Hg(F3)	SOP BR-0013	2.00	5.00	ng/g
Hg(F4)	SOP BR-0013	2.00	5.00	ng/g
Hg(F5)	SOP BR-0013	2.00	5.00	ng/g
Hg(F6)	SOP BR-0013	2.00	5.00	ng/g
Hg(II)R	SOP BR-0012	0.08	0.25	ng/g

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Sediment

<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
Hg(NonMob)	EPA 3200	0.25	0.75	ng/g
Hg(SemiMob)	EPA 3200	0.20	0.60	ng/g
K	EPA 1638	20	60	mg/kg
La	EPA 1638	0.005	0.050	mg/kg
MeHg	EPA 1630	0.008	0.025	ng/g
Mg	EPA 1638	2.5	25.0	mg/kg
MMAs	EPA 1632	0.004	0.012	mg/kg
Mn	EPA 1638	0.06	0.25	mg/kg
Mo	EPA 1638	0.10	1.00	mg/kg
Na	EPA 1638	8	75	mg/kg
Ni	EPA 1638	0.26	1.00	mg/kg
Ni	EPA 1638 DRC	0.23	1.00	mg/kg
Pb	EPA 1638	0.056	0.150	mg/kg
Sb	EPA 1638	0.05	0.15	mg/kg
Se	EPA 1638	0.90	1.80	mg/kg
Se	EPA 1638 DRC	0.16	1.00	mg/kg
Se(IV)	SOP BR-0061 HPLC	0.05	0.20	mg/kg
Se(VI)	SOP BR-0061 HPLC	0.05	0.20	mg/kg
Sn	EPA 1638	0.05	0.15	mg/kg
Sr	EPA 1638	0.020	0.060	mg/kg
Th	EPA 1638	0.25	0.75	mg/kg
Ti	EPA 1638	0.74	2.25	mg/kg
Tl	EPA 1638	0.018	0.050	mg/kg
U	EPA 1638	0.010	0.050	mg/kg
V	EPA 1638	5.20	15.0	mg/kg
V	EPA 1638 DRC	0.08	0.75	mg/kg
Zn	EPA 1638	0.40	1.80	mg/kg
Zn	EPA 1638 DRC	0.25	1.00	mg/kg

Water (Saline)

<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
Ag	EPA 1640 APDC	0.005	0.015	µg/L
Ag	EPA 1640 RP	0.011	0.036	µg/L
As	EPA 1640 RP	0.05	0.15	µg/L
Be	EPA 1640 RP	0.006	0.013	µg/L
Cd	EPA 1640 APDC	0.004	0.030	µg/L
Cd	EPA 1640 Column	0.0010	0.0100	µg/L
Cd	EPA 1640 RP	0.004	0.012	µg/L
Co	EPA 1640 Column	0.0020	0.0100	µg/L
Co	EPA 1640 RP	0.020	0.090	µg/L
Cr	EPA 1640 RP	0.040	0.100	µg/L
Cu	EPA 1640 APDC	0.09	0.55	µg/L
Cu	EPA 1640 Column	0.0040	0.0200	µg/L
Cu	EPA 1640 RP	0.04	0.12	µg/L

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Water (Saline)

<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
Fe	EPA 1640 Column	0.04	0.12	µg/L
Mn	EPA 1640 Column	0.00	0.00	µg/L
Ni	EPA 1640 APDC	0.040	0.120	µg/L
Ni	EPA 1640 Column	0.0060	0.0200	µg/L
Ni	EPA 1640 RP	0.04	0.14	µg/L
Pb	EPA 1640 APDC	0.015	0.150	µg/L
Pb	EPA 1640 Column	0.0010	0.0100	µg/L
Pb	EPA 1640 RP	0.003	0.013	µg/L
Sb	EPA 1640 RP	0.004	0.015	µg/L
Se	EPA 1640 RP	0.070	0.210	µg/L
Tl	EPA 1640 RP	0.003	0.010	µg/L
V	EPA 1640 Column	0.007	0.025	µg/L
V	EPA 1640 RP	0.015	0.100	µg/L
Zn	EPA 1640 Column	0.015	0.050	µg/L
Zn	EPA 1640 RP	0.26	0.75	µg/L

Water *

<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
Ag	EPA 1638	0.005	0.020	µg/L
Al	EPA 1638	0.50	1.50	µg/L
As	EPA 1632	0.030	0.100	µg/L
As	EPA 1638	0.09	0.27	µg/L
As	EPA 1638 DRC	0.009	0.030	µg/L
As(III)	EPA 1632	0.008	0.025	µg/L
As(III)	SOP BR-0061 HPLC	0.013	0.050	µg/L
As(Inorg)	EPA 1632	0.008	0.025	µg/L
As(V)	EPA 1632	0.008	0.025	µg/L
As(V)	SOP BR-0061 HPLC	0.013	0.050	µg/L
Au	EPA 1638	0.006	0.020	µg/L
B	EPA 1638	0.40	2.00	µg/L
Ba	EPA 1638	0.010	0.050	µg/L
Be	EPA 1638	0.050	0.150	µg/L
Bi	EPA 1638	0.010	0.050	µg/L
Ca	EPA 1638	6.00	30.0	µg/L
Cd	EPA 1638	0.007	0.020	µg/L
Cd	EPA 1638 DRC	0.002	0.010	µg/L
Ce	EPA 1638	0.0010	0.0100	µg/L
Co	EPA 1638	0.020	0.100	µg/L
Co	EPA 1638 DRC	0.010	0.100	µg/L
Cr	EPA 1638	0.05	0.15	µg/L
Cr	EPA 1638 DRC	0.015	0.045	µg/L
Cr(III)	EPA 1638	4.00	10.0	µg/L
Cr(VI)	SM3500-CrB/7196A mod.	4.0	10.0	µg/L
Cr(VI)	SOP BR-0061 HPLC	0.060	0.200	µg/L

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Water *

<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
Cu	EPA 1638	0.040	0.120	µg/L
Cu	EPA 1638 DRC	0.011	0.050	µg/L
DMA _s	EPA 1632	0.018	0.050	µg/L
DMA _s	SOP BR-0061 HPLC	0.013	0.050	µg/L
Fe	EPA 1638	1.4	5.0	µg/L
Fe	EPA 1638 DRC	0.24	1.00	µg/L
Fe	SM 3500-Fe B mod.	7.3	20.0	µg/L
Fe	SM 3500-Fe B mod.	7.3	20.0	µg/L
Fe(II)	SM 3500-Fe B mod.	7.8	20.0	µg/L
Fe(III)	SM 3500-Fe B mod.	7.8	20.0	µg/L
Hardness	EPA 1638	6.00	30.0	µg/L
Hg	EPA 1631	0.15	0.40	ng/L
Hg(AcidLab)	SOP BR-0003	0.15	0.40	ng/L
Hg(II)R	In-House	0.15	0.40	ng/L
Hg(TotVol)	SOP BR-0005	0.10	0.25	ng/L
In	EPA 1638	0.0020	0.0040	µg/L
K	EPA 1638	5.0	15.0	µg/L
La	EPA 1638	0.0010	0.0100	µg/L
Li	EPA 1638	0.05	0.15	µg/L
Lu	EPA 1638	0.0010	0.0100	µg/L
MeHg	EPA 1630	0.020	0.050	ng/L
MeHg (low level)	EPA 1630	0.010	0.025	ng/L
Mg	EPA 1638	3.00	15.0	µg/L
MMA _s	EPA 1632	0.012	0.050	µg/L
MMA _s	SOP BR-0061 HPLC	0.013	0.050	µg/L
Mn	EPA 1638	0.020	0.060	µg/L
Mn(II)	EPA 1638	0.020	0.060	µg/L
Mn(IV)	EPA 1638	0.020	0.060	µg/L
Mo	EPA 1638	0.010	0.030	µg/L
Na	EPA 1638	3.0	15.0	µg/L
Ni	EPA 1638	0.04	0.20	µg/L
Ni	EPA 1638 DRC	0.050	0.200	µg/L
Pb	EPA 1638	0.006	0.025	µg/L
Sb	EPA 1638	0.010	0.040	µg/L
Se	EPA 1638	0.11	0.33	µg/L
Se	EPA 1638 DRC	0.020	0.060	µg/L
Se(IV)	SOP BR-0061 HPLC	0.030	0.100	µg/L
Se(VI)	SOP BR-0061 HPLC	0.030	0.100	µg/L
SeCN	SOP BR-0061 HPLC	0.03	0.10	µg/L
Si	EPA 1638	100	300	µg/L
Sn	EPA 1638	0.050	0.150	µg/L
Sr	EPA 1638	0.010	0.050	µg/L
Tb	EPA 1638	0.0010	0.0100	µg/L
Te	EPA 1638	0.020	0.060	µg/L

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<u>Analyte</u>	<u>Method</u>	<u>MDL</u>	<u>MRL</u>	<u>Units</u>
Th	EPA 1638	0.003	0.020	µg/L
Ti	EPA 1638	0.05	0.20	µg/L
Tl	EPA 1638	0.003	0.010	µg/L
Tm	EPA 1638	0.0010	0.0100	µg/L
TSS	EPA 160.2	0.3	1.0	mg/L
U	EPA 1638	0.003	0.010	µg/L
V	EPA 1638	0.05	0.15	µg/L
V	EPA 1638 DRC	0.010	0.030	µg/L
W	EPA 1638	0.010	0.040	µg/L
Y	EPA 1638	0.0010	0.0100	µg/L
Zn	EPA 1638	0.06	0.20	µg/L
Zn	EPA 1638 DRC	0.028	0.200	µg/L

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