

Laboratory Control Standards (LCS)

Lab ID
File ID

07-0185 ICV

07-0185 LFB-1

Compound	Spike Conc	Measured	Recovery	Recovery Range	Spike Conc	Measured	Recovery
	µg/L	µg/L	%	%	mg/kg	mg/kg	%
Ag	5.00	5.51	110	85-115	5.00	4.64	93
Al	50.00	47.74	95	85-115	40.0	36.3	91
Cd	5.00	5.371	107	85-115	20.00	19.66	98
Cr	50.00	50.21	100	85-115	5.00	5.22	104
Cu	50.00	52.22	104	85-115	200.0	213.0	106
Fe	50.00	51.67	103	85-115	1000	1013	101
Ni	50.00	56.01	112	85-115	5.00	5.47	109
Pb	5.00	5.48	110	85-115	5.00	5.55	111
Se	50.00	51.20	102	85-115	5.0	4.60	92
Zn	50.00	49.34	99	85-115	100.0	96.21	96

07-0185 LFB-2

07-0185 CRM 1 (MES)

Recovery Range %	Spike Conc mg/kg	Measured mg/kg	Recovery %	Recovery Range %	Spike Conc mg/kg	Measured mg/kg
75-125	50.00	52.24	104	75-125	0.18	0.29
75-125	50.00	45.7	91	75-125	85900	69977
75-125	50.00	50.83	102	75-125	0.24	0.25
75-125	50.00	50.87	102	75-125	105	85
75-125	50.00	54.68	109	75-125	33.9	34.9
75-125	250.0	249.1	100	75-125	43400	38048
75-125	50.00	53.96	108	75-125	46.9	44.8
75-125	50.00	54.07	108	75-125	21.1	22.8
75-125	50.0	48.36	97	75-125	0.72	0.80
75-125	250.0	242.3	97	75-125	159	148

S 3)

07-0185 CRM 2 (NIST 2709)

Recovery %	Recovery Range %	Spike Conc. mg/kg	True Measured mg/kg	Recovery %	Conc. Leac mg/kg	Recovery %	Recovery Range %
159	75-125	0.41	0.57	140	N/A	N/A	75-125
81	75-125	7500	45910	61	26000	177	75-125
105	75-125	0.38	0.39	102	N/A	N/A	75-125
81	75-125	130	95	73	79	121	75-125
103	75-125	34.6	37.0	107	32.00	116	75-125
88	75-125	35000	32450	93	30000	108	75-125
96	75-125	88.0	81.4	93	78.00	104	75-125
108	75-125	18.9	15.11	80	13.00	116	75-125
112	75-125	1.57	1.05	67	N/A	N/A	75-125
93	75-125	106	103	97	100	103	75-125

07-0185 CRM 3 (NIST 2710)

07-0182 IC

Age	Spike Conc. mg/kg	Tr Measured mg/kg	Recovery %	Conc. Leac mg/kg	Recovery %	Recovery Range %	Spike Conc µg/L
	35.3	33.4	95	28.0	119	75-125	5.000
	64400	34173	53	18000	190	75-125	
	21.8	20.9	96	20.0	104	75-125	5.000
	39.0	25.2	66	19.0	133	75-125	50.00
	2950	3024	103	2700	112	75-125	50.00
	33800	30596	91	27000	113	75-125	50.00
	14.30	13.22	92	10.10	131	75-125	50.00
	5532	6622	120	5100	130	75-125	5.000
	N/A	0.65	N/A	N/A	N/A	75-125	50.00
	6952	6154	89	5900	104	75-125	50.00

2V

07-0182 LFB-1

Measured µg/L	Recovery %	Recovery Range %	Spike Conc mg/kg	Measured mg/kg	Recovery %	Recovery Range %	
5.53	111	85-115	2.50	0.69	28	75-125	
5.371	107	85-115	10.00	9.742	97	75-125	
50.21	100	85-115	2.50	2.67	107	75-125	
52.22	104	85-115	100.0	104.9	105	75-125	
51.67	103	85-115	500.0	515.5	103	75-125	
56.01	112	85-115	2.50	2.78	111	75-125	
5.476	110	85-115	2.50	2.80	112	75-125	
51.20	102	85-115	2.50	2.45	98	75-125	
49.34	99	85-115	50.00	45.63	91	75-125	

07-0182 LFB-2

Spike Conc mg/kg	Measured mg/kg	Recovery %	Recovery Range %
2.50	0.70	28	75-125
10.00	10.19	102	75-125
2.50	2.81	112	75-125
100.0	109.0	109	75-125
500.0	538.8	108	75-125
2.50	2.91	116	75-125
2.50	2.94	118	75-125
2.50	2.42	97	75-125
50.00	48.02	96	75-125

07-0182 CRM 1 (DORM-2)

Spike Conc mg/kg	Measured mg/kg	Recovery %	Recovery Range %
0.041	0.04	93	75-125
0.043	0.050	116	75-125
34.70	12.84	N/A	75-125
2.34	2.11	90	75-125
142	78.2	N/A	75-125
19.40	7.45	N/A	75-125
0.065	0.059	91	75-125
1.40	1.75	125	75-125
25.60	22.56	88	75-125

07-0182 CRM 2 (DOLT-3)

Age	Spike Conc. mg/kg	Measured mg/kg	Recovery %	Recovery Range %
	1.20	1.19	99	75-125
	19.4	17.9	92	75-125
	3.5	3.3	95	75-125
	31.20	31.43	101	75-125
	1484	1349	91	75-125
	2.72	2.43	89	75-125
	0.32	0.32	100	75-125
	7.06	7.03	100	75-125
	86.60	78.59	91	75-125

07-0182b ICV

Spike Conc. µg/L	Measured µg/L	Recovery %
50.00	48.68	99

07-0182b LFB-1

07-0182b LFB-2

Recovery Range %	Spike Conc mg/kg	Measured mg/kg	Recovery %	Recovery Range %	Spike Conc mg/kg	Measured mg/kg
85-115	20.00	21.88	109	75-125	20.00	21.79

07-0182b CRM 1 (DORM-2)

07-0182b C

Recovery %	Recovery Range %	Spike Conc mg/kg	Measured mg/kg	Recovery %	Recovery Range %	Spike Conc. To mg/kg
109	75-125	10.90	3.90	36	75-125	25.00

CRM 2 (DOLT-3)

Measured mg/kg	Recovery %	Recovery Range %
22.96	92	75-125

07-0185-1 ICV

Spike Conc µg/L	Measured µg/L	Recovery %	Recovery Range %
50.0	46.2	92	85-115
50.00	50.90	102	85-115

07-0185-1 LFB-1

07-0185-1 LFB-2

Age	Spike Conc mg/kg	Measured mg/kg	Recovery %	Recovery Range %	Spike Conc mg/kg	Measured mg/kg	Recovery %
	10000	10917	109	75-125	10000	10394	104
	15.00	16.47	110	75-125	15	15.44	103

07-0185-1 CRM 1 (MESS 3)

07-0185-1 CRM 2 (NIS)

Recovery Range %	Spike Conc mg/kg	Measured mg/kg	Recovery %	Recovery Range %	Spike Conc mg/kg	Measured mg/kg
75-125	85900	56903	66	75-125	75000	52005
75-125	46.9	47.8	102	75-125	88.0	97.1

ST 2709)

07-0185-1 CRM 3 (NIST 2710)

Recovery %	Conc. Lead mg/kg	Recovery %	Recovery Range %	Spike Conc. Total mg/kg	Measured mg/kg	Recovery %	Conc. Lead mg/kg
69	26000	200	75-125	64400	31537	49	18000
110	78.00	125	75-125	14.3	13.25	93	10.10

Maxtix Spikes/Matrix Spike Duplicates
07BR0182-12 MS

Recovery %	Recovery Range %	Spike Conc mg/kg	Sample Conc mg/kg	Measured Cor/S mg/kg	Recovery %	Recovery Range %
175	75-125	4.92	0.08	4.99	100	70-130
		19.69	0.06	21.32	108	70-130
		4.92	9.05	16.98	N/A	70-130
		196.9	2.43	221.3	111	70-130
		984.3	3990	5672	N/A	70-130
131	75-125	4.92	2.50	8.62	124	70-130
		4.92	0.06	5.38	108	70-130
		98.43	11.88	130.4	120	70-130

07BR0182-12 MSD

Spike Conc mg/kg	Measured mg/kg	CorSD %	Recovery %	Rarplicate %	RP: Duplicate %
4.99	4.76	94	70-130	5	30
19.96	19.88	99	70-130	7	30
4.99	17.71	N/A	70-130	4	30
199.6	204.5	101	70-130	8	30
998.0	6184	N/A	70-130	9	30
4.99	8.09	112	70-130	6	30
4.99	5.11	101	70-130	5	30
99.80		96	70-130	19	30

07BR0182-01 MS

Spike Conc mg/kg	ample Con mg/kg
5.02	0.02
20.08	0.232
5.02	0.34
200.8	1.05
1004	77.8
5.02	0.16
5.020	0.434
5.02	0.84
100.4	13.6

07BR0182-01 MSD

Measured Concentration mg/kg	Corr/IS Recovery %	Recovery Range %	Spike Concentration mg/kg	Measured Concentration mg/kg	Corr/IS Recovery %	Recovery Range %	Replicate RP %	Duplicate F %
1.26	25	70-130	4.92	1.38	28	70-130	9	30
18.99	93	70-130	19.69	20.68	104	70-130	9	30
5.56	104	70-130	4.92	6.41	123	70-130	14	30
201.5	100	70-130	196.9	216.2	109	70-130	7	30
1059	98	70-130	984.3	1134	107	70-130	7	30
5.60	108	70-130	4.92	5.93	117	70-130	6	30
5.787	107	70-130	4.92	6.20	117	70-130	7	30
5.51	93	70-130	4.92	5.87	102	70-130	6	30
100.5	87	70-130	98.43	108.9	97	70-130	8	30

07BR0182-13 MS

07BR0182-13 MSD

RPD

Spike Conc	ample Conc	asured Cor	IS Recover	covery Rar	Spike Conc	asured Cor
mg/kg	mg/kg	mg/kg	%	%	mg/kg	mg/kg
4.92	0.01	1.25	25	70-130	4.76	1.22
19.69	0.213	19.00	95	70-130	19.05	18.27
4.92	0.28	5.44	105	70-130	4.76	5.19
196.9	0.88	202.4	102	70-130	190.5	191.0
984.3	74.4	1056	100	70-130	952.4	1003
4.92	0.13	5.47	108	70-130	4.76	5.19
4.921	0.324	5.682	109	70-130	4.762	5.434
4.92	0.68	5.39	96	70-130	4.76	5.30
98.43	11.04	98.86	89	70-130	95.24	93.94

07BR0182-01 MS

SD Recovery %	Recovery %	Rarpulicate %	RP Duplicate %	Spike Conc mg/kg	ample Conc mg/kg	measured Cor/S mg/kg	Recovery %
26	70-130	2	30	40.16	36.16	65.68	74
95	70-130	4	30				
103	70-130	5	30				
100	70-130	6	30				
98	70-130	5	30				
106	70-130	5	30				
107	70-130	4	30				
97	70-130	2	30				
87	70-130	5	30				

07BR0182-01 MSD

Recovery %	Raw Spike mg/kg	Conc. asured mg/kg	CorSD %	Recovery %	Raw Spike mg/kg	Conc. asured mg/kg	CorSD %
70-103	39.37	72.94	93	70-130	10	30	

07BR0182-12 MS

07BR0182-

uplicate RP: Duplicate RPD
% %

Spike Conc ample Con:asured Cor/IS Recover:covery RarSpike Conc
mg/kg mg/kg mg/kg % % mg/kg

11 30

9747 3852 15831 123 70-130 9881

14.62 3.26 19.95 114 70-130 14.82

-12 MSD

Post Preparation Spikes
07BR0182-12 PPS

Measured Concentration
mg/kg

Recovery %

Recovery Range %

Replicate Count

RPD %

Spike Concentration
mg/kg

Measured Concentration
mg/kg

Corrected Concentration
mg/kg

16380 127 70-130 3 30

125.3 9.05 134.8

20.69 118 70-130 4 30

5010 3990 8481

07BR0182-01 PPS

IS Recovery Range
% %

Spike Conc sample Conc asured CorPS Recovery Range
mg/kg mg/kg mg/kg % %

4.02 0.02 3.87 96 75-125

100 75-125

90 75-125

07BR0182-01 PPSD

07BR0182-13 PPS

Spike Conc:	asured Cor	SD Recove	recovery Rar	puplicate RP	Duplicate RPD
mg/kg	mg/kg	%	%	%	%
8.03	8.64	107	75-125	11	25

Spike Conc	ample Con
mg/kg	mg/kg
3.75	0.01

07BR0182-13 PPSD

Measured Concentration mg/kg	CorPS Recovery %	Recovery Range %	Spike Concentration mg/kg	Measured Concentration mg/kg	CorPS Recovery %	Recovery Range %	Duplicate Recovery %	Duplicate Recovery %
3.57	95	75-125	7.50	6.83	91	75-125	4	25

07BR0182-13 PPS

RPD	Spike Conc mg/kg	ample Conc mg/kg	measured Cor mg/kg	PS Recove %	recovery Range %
	938.1	47.40	1026	104	75-125