

Instrument Summary:

Instrument ID: iCAP Q
Serial Number: Undefined

Labbook Summary:

Path and filename: _Application Data\Workspace\LabBooks\wlw\20210930-1.imexp
Labbook created by: Administrator
Based on template:
Hardware configuration: iCAPQ1
Labbook type: eQuant
Qtegra version (last saved): 2.7.2425.154
Labbook started: 9/30/2021 11:27:28 AM
Labbook finished: 9/30/2021 2:02:14 PM

Method Summary:

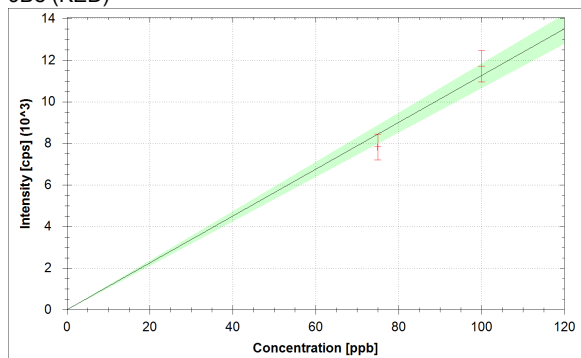
Isotope	Mode	Dwell time (s)	# of Channels	Spacing	Resolution	IS
6Li (KED)	KED	0.03	3	0.1	Normal	
9Be (KED)	KED	0.03	3	0.1	Normal	6Li (KED)
11B (KED)	KED	0.03	3	0.1	Normal	6Li (KED)
24Mg (KED)	KED	0.03	3	0.1	Normal	6Li (KED)
27Al (KED)	KED	0.03	3	0.1	Normal	45Sc (KED)
45Sc (KED)	KED	0.03	3	0.1	Normal	
51V (KED)	KED	0.03	3	0.1	Normal	45Sc (KED)
52Cr (KED)	KED	0.03	3	0.1	Normal	45Sc (KED)
55Mn (KED)	KED	0.03	3	0.1	Normal	45Sc (KED)
56Fe (KED)	KED	0.03	3	0.1	Normal	45Sc (KED)
58Ni (KED)	KED	0.03	3	0.1	Normal	45Sc (KED)
59Co (KED)	KED	0.03	3	0.1	Normal	45Sc (KED)
63Cu (KED)	KED	0.03	3	0.1	Normal	89Y (KED)
64Zn (KED)	KED	0.03	3	0.1	Normal	89Y (KED)
69Ga (KED)	KED	0.03	3	0.1	Normal	89Y (KED)
75As (KED)	KED	0.03	3	0.1	Normal	89Y (KED)
80Se (KED)	KED	0.03	3	0.1	Normal	89Y (KED)
85Rb (KED)	KED	0.03	3	0.1	Normal	89Y (KED)
88Sr (KED)	KED	0.03	3	0.1	Normal	89Y (KED)
89Y (KED)	KED	0.03	3	0.1	Normal	
107Ag (KED)	KED	0.03	3	0.1	Normal	115In (KED)
114Cd (KED)	KED	0.03	3	0.1	Normal	115In (KED)
115In (KED)	KED	0.03	3	0.1	Normal	
133Cs (KED)	KED	0.03	3	0.1	Normal	115In (KED)
138Ba (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
139La (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
140Ce (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
141Pr (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
142Nd (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
152Sm (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
153Eu (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
158Gd (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
159Tb (KED)	KED	0.03	3	0.1	Normal	
164Dy (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
166Er (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
169Tm (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
174Yb (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
175Lu (KED)	KED	0.03	3	0.1	Normal	159Tb (KED)
205Tl (KED)	KED	0.03	3	0.1	Normal	209Bi (KED)
208Pb (KED)	KED	0.03	3	0.1	Normal	209Bi (KED)
209Bi (KED)	KED	0.03	3	0.1	Normal	
232Th (KED)	KED	0.03	3	0.1	Normal	209Bi (KED)
238U (KED)	KED	0.03	3	0.1	Normal	209Bi (KED)

Isotope	Mode	Dwell time (s)	# of Channels	Spacing	Resolution
6Li (KED)	KED	0.03	3	0.1	Normal
45Sc (KED)	KED	0.03	3	0.1	Normal
89Y (KED)	KED	0.03	3	0.1	Normal
115In (KED)	KED	0.03	3	0.1	Normal
159Tb (KED)	KED	0.03	3	0.1	Normal
209Bi (KED)	KED	0.03	3	0.1	Normal

No. of sweeps	Time per sweep[s]	Time per main run[s]
10	3.87	38.7

Calibration Curves:

9Be (KED)



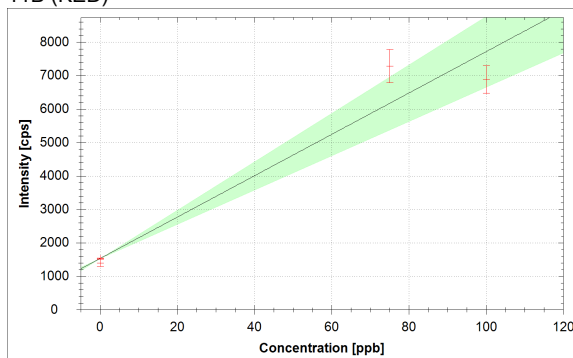
$$f(x) = 112.5842 \cdot x$$

$$R^2 = 0.9943$$

$$\text{BEC} = 0.000 \text{ ppb}$$

$$\text{LoD} = 0.0000 \text{ ppb}$$

11B (KED)



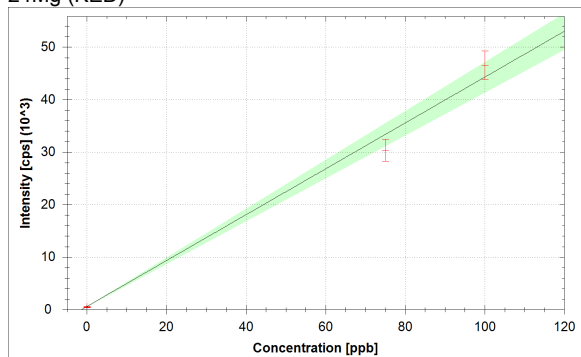
$$f(x) = 61.8213 \cdot x + 1534.7946$$

$$R^2 = 0.9382$$

$$\text{BEC} = 24.826 \text{ ppb}$$

$$\text{LoD} = 5.0582 \text{ ppb}$$

24Mg (KED)



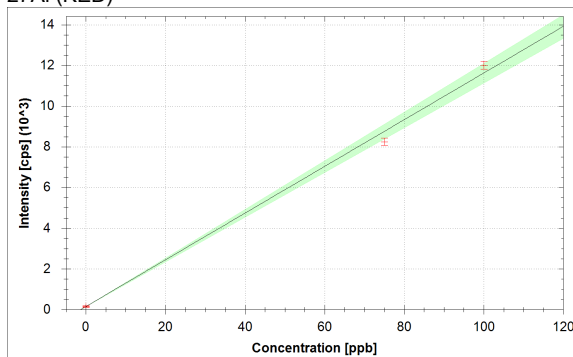
$$f(x) = 436.8941 \cdot x + 589.0672$$

$$R^2 = 0.9909$$

$$\text{BEC} = 1.348 \text{ ppb}$$

$$\text{LoD} = 0.4492 \text{ ppb}$$

27Al (KED)



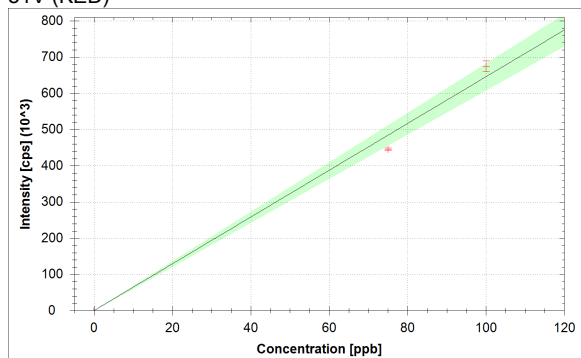
$$f(x) = 114.7128 \cdot x + 150.4462$$

$$R^2 = 0.9962$$

$$\text{BEC} = 1.312 \text{ ppb}$$

$$\text{LoD} = 0.5256 \text{ ppb}$$

51V (KED)



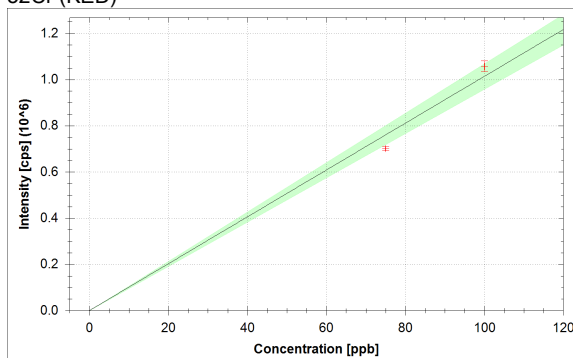
$$f(x) = 6457.3024 \cdot x + 20.8140$$

$$R^2 = 0.9931$$

$$\text{BEC} = 0.003 \text{ ppb}$$

$$\text{LoD} = 0.0009 \text{ ppb}$$

52Cr (KED)



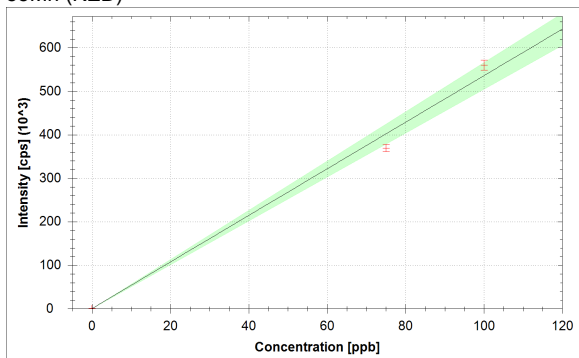
$$f(x) = 10134.4046 \cdot x + 187.4493$$

$$R^2 = 0.9936$$

$$\text{BEC} = 0.018 \text{ ppb}$$

$$\text{LoD} = 0.0118 \text{ ppb}$$

55Mn (KED)



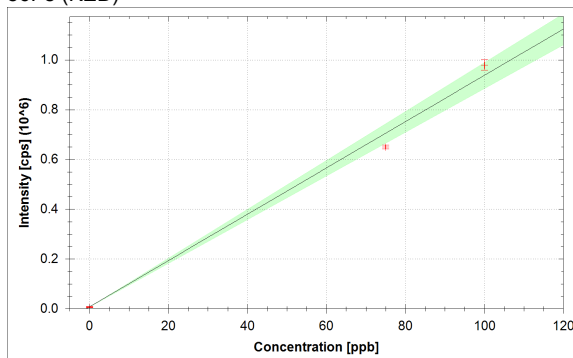
$$f(x) = 5353.2123 \cdot x + 458.5360$$

$$R^2 = 0.9929$$

$$\text{BEC} = 0.086 \text{ ppb}$$

$$\text{LoD} = 0.0375 \text{ ppb}$$

56Fe (KED)



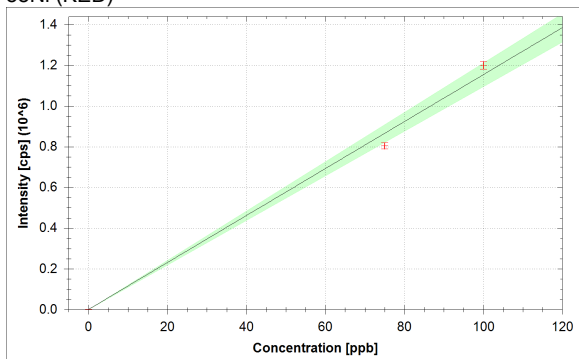
$$f(x) = 9303.8766 \cdot x + 7407.2151$$

$$R^2 = 0.9933$$

$$\text{BEC} = 0.796 \text{ ppb}$$

$$\text{LoD} = 0.7148 \text{ ppb}$$

58Ni (KED)



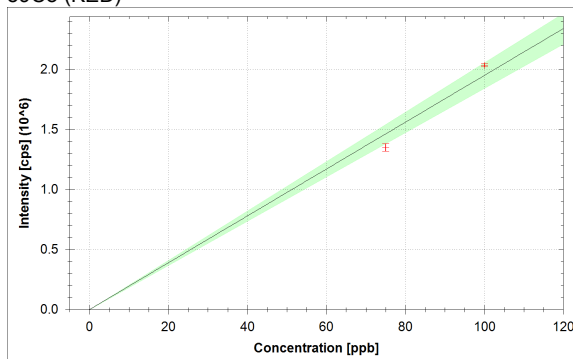
$$f(x) = 11538.9026 \cdot x + 435.6502$$

$$R^2 = 0.9945$$

$$\text{BEC} = 0.038 \text{ ppb}$$

$$\text{LoD} = 0.0196 \text{ ppb}$$

59Co (KED)



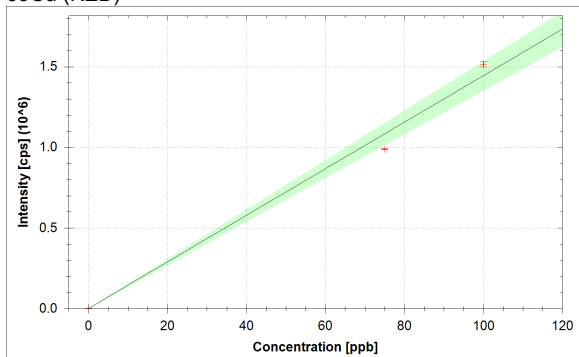
$$f(x) = 19503.4094 \cdot x + 61.5200$$

$$R^2 = 0.9936$$

$$\text{BEC} = 0.003 \text{ ppb}$$

$$\text{LoD} = 0.0028 \text{ ppb}$$

63Cu (KED)



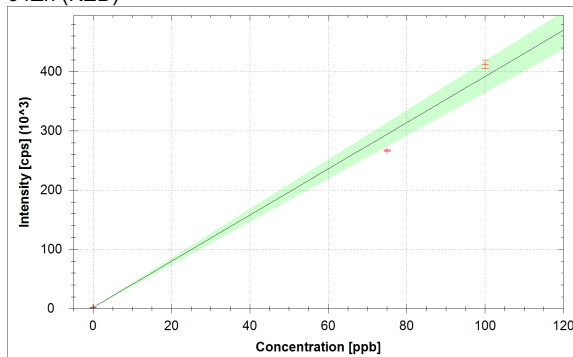
$$f(x) = 14437.8344 \cdot x + 790.9444$$

$$R^2 = 0.9918$$

$$\text{BEC} = 0.055 \text{ ppb}$$

$$\text{LoD} = 0.0317 \text{ ppb}$$

64Zn (KED)



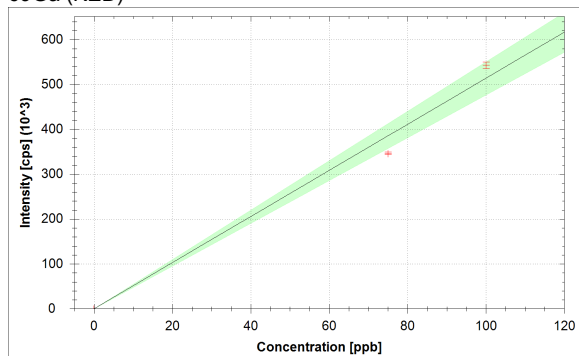
$$f(x) = 3897.6486 \cdot x + 1819.2909$$

$$R^2 = 0.9904$$

$$\text{BEC} = 0.467 \text{ ppb}$$

$$\text{LoD} = 0.2221 \text{ ppb}$$

69Ga (KED)



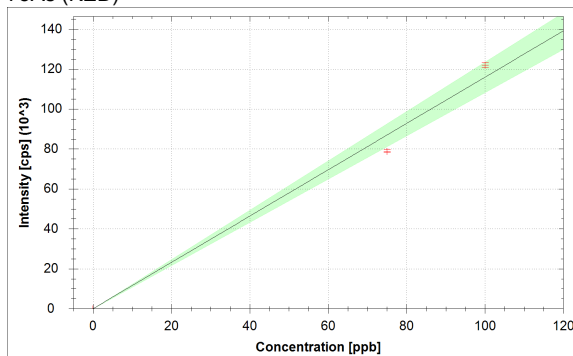
$$f(x) = 5137.6488 \cdot x + 85.4044$$

$$R^2 = 0.9890$$

$$\text{BEC} = 0.017 \text{ ppb}$$

$$\text{LoD} = 0.0066 \text{ ppb}$$

75As (KED)



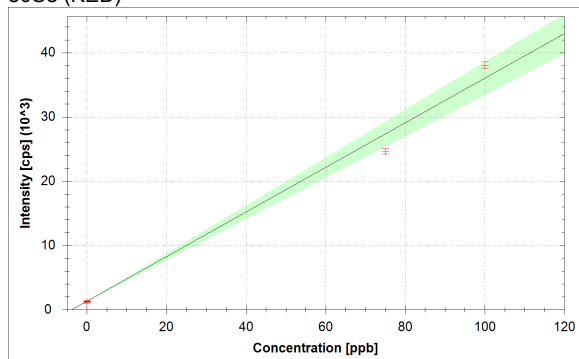
$$f(x) = 1158.9687 \cdot x + 14.6240$$

$$R^2 = 0.9907$$

$$\text{BEC} = 0.013 \text{ ppb}$$

$$\text{LoD} = 0.0134 \text{ ppb}$$

80Se (KED)



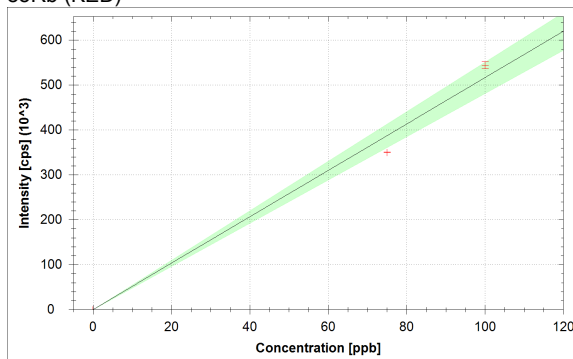
$$f(x) = 347.2437 \cdot x + 1290.9908$$

$$R^2 = 0.9886$$

$$\text{BEC} = 3.718 \text{ ppb}$$

$$\text{LoD} = 1.1677 \text{ ppb}$$

85Rb (KED)



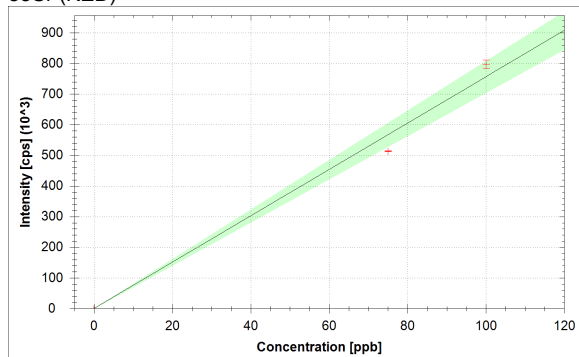
$$f(x) = 5163.0484 \cdot x + 29.1536$$

$$R^2 = 0.9902$$

$$\text{BEC} = 0.006 \text{ ppb}$$

$$\text{LoD} = 0.0039 \text{ ppb}$$

88Sr (KED)



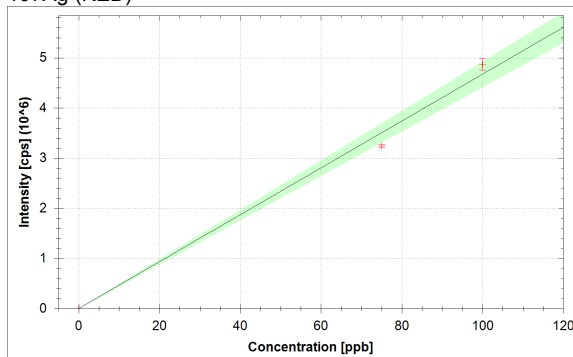
$$f(x) = 7563.0978 \cdot x + 241.5375$$

$$R^2 = 0.9901$$

$$\text{BEC} = 0.032 \text{ ppb}$$

$$\text{LoD} = 0.0136 \text{ ppb}$$

107Ag (KED)

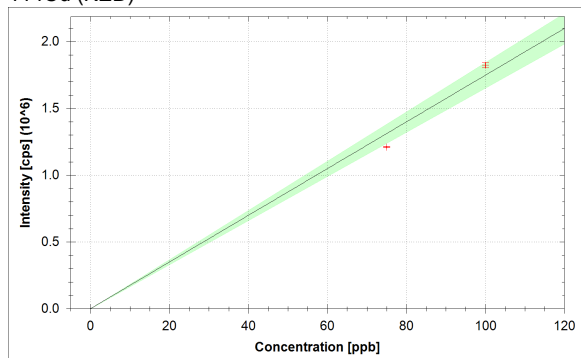


$$f(x) = 46728.7599 \cdot x + 121.2719$$

$$R^2 = 0.9938$$

$$\text{BEC} = 0.003 \text{ ppb}$$

$$\text{LoD} = 0.0020 \text{ ppb}$$

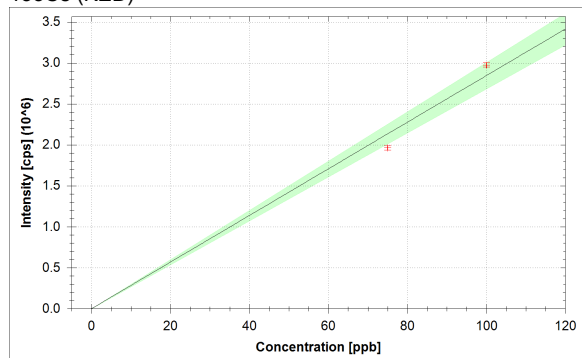
¹¹⁴Cd (KED)

$$f(x) = 17472.9622 \cdot x + 74.5983$$

$$R^2 = 0.9936$$

$$\text{BEC} = 0.004 \text{ ppb}$$

$$\text{LoD} = 0.0021 \text{ ppb}$$

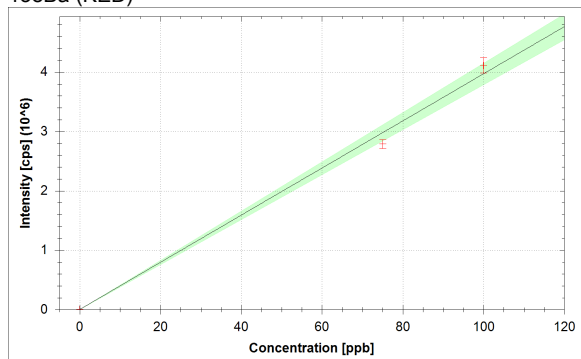
¹³³Cs (KED)

$$f(x) = 28448.3608 \cdot x + 67.9262$$

$$R^2 = 0.9931$$

$$\text{BEC} = 0.002 \text{ ppb}$$

$$\text{LoD} = 0.0011 \text{ ppb}$$

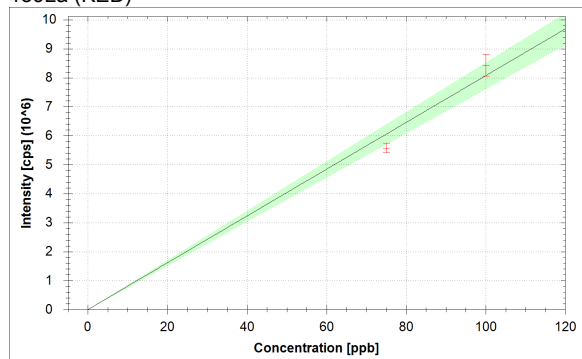
¹³⁸Ba (KED)

$$f(x) = 39680.8402 \cdot x + 2331.3765$$

$$R^2 = 0.9955$$

$$\text{BEC} = 0.059 \text{ ppb}$$

$$\text{LoD} = 0.0269 \text{ ppb}$$

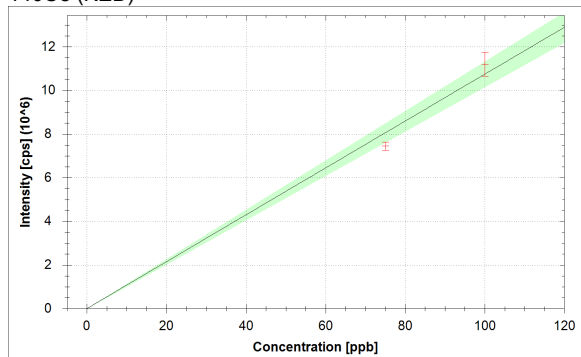
¹³⁹La (KED)

$$f(x) = 80725.0728 \cdot x + 129.2370$$

$$R^2 = 0.9933$$

$$\text{BEC} = 0.002 \text{ ppb}$$

$$\text{LoD} = 0.0006 \text{ ppb}$$

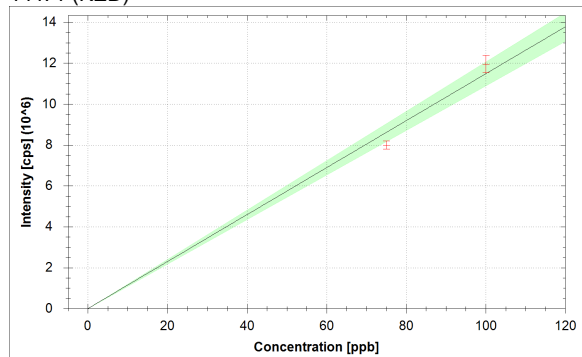
¹⁴⁰Ce (KED)

$$f(x) = 107425.2269 \cdot x + 436.9326$$

$$R^2 = 0.9938$$

$$\text{BEC} = 0.004 \text{ ppb}$$

$$\text{LoD} = 0.0023 \text{ ppb}$$

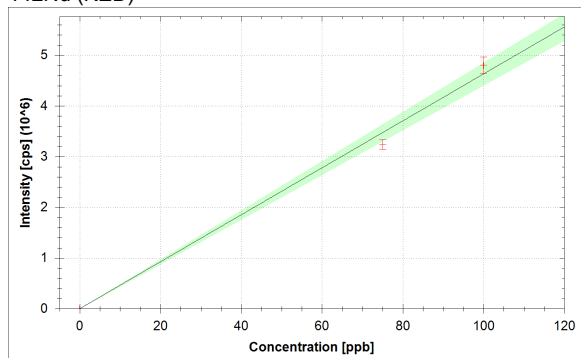
¹⁴¹Pr (KED)

$$f(x) = 114813.4179 \cdot x + 67.6200$$

$$R^2 = 0.9944$$

$$\text{BEC} = 0.001 \text{ ppb}$$

$$\text{LoD} = 0.0003 \text{ ppb}$$

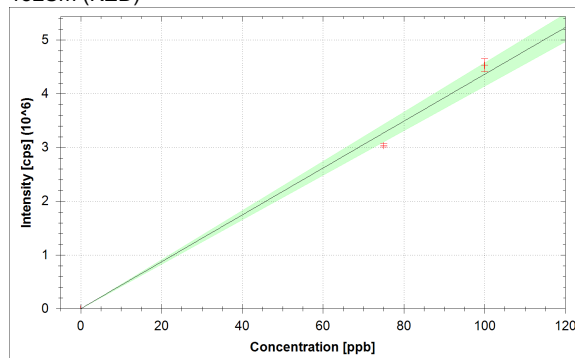
¹⁴²Nd (KED)

$$f(x) = 46315.6679 \cdot x + 93.2242$$

$$R^2 = 0.9951$$

$$\text{BEC} = 0.002 \text{ ppb}$$

$$\text{LoD} = 0.0004 \text{ ppb}$$

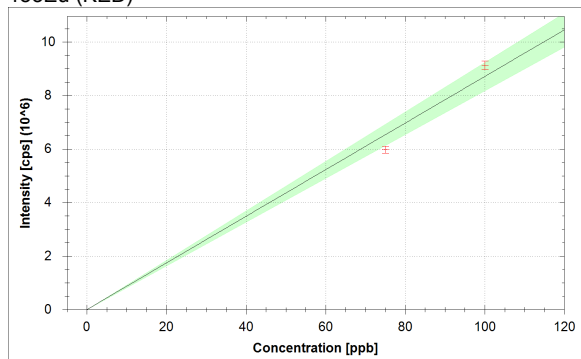
¹⁵²Sm (KED)

$$f(x) = 43601.1998 \cdot x + 31.4796$$

$$R^2 = 0.9946$$

$$\text{BEC} = 0.001 \text{ ppb}$$

$$\text{LoD} = 0.0002 \text{ ppb}$$

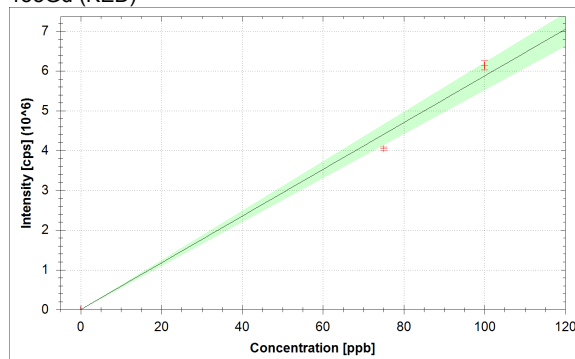
¹⁵³Eu (KED)

$$f(x) = 87102.4883 \cdot x + 51.7689$$

$$R^2 = 0.9921$$

$$\text{BEC} = 0.001 \text{ ppb}$$

$$\text{LoD} = 0.0003 \text{ ppb}$$

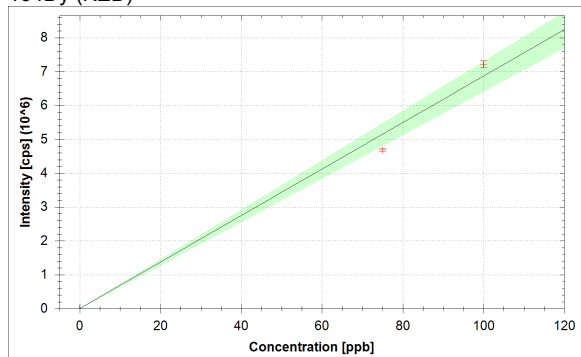
¹⁵⁸Gd (KED)

$$f(x) = 58721.1545 \cdot x + 33.7391$$

$$R^2 = 0.9928$$

$$\text{BEC} = 0.001 \text{ ppb}$$

$$\text{LoD} = 0.0006 \text{ ppb}$$

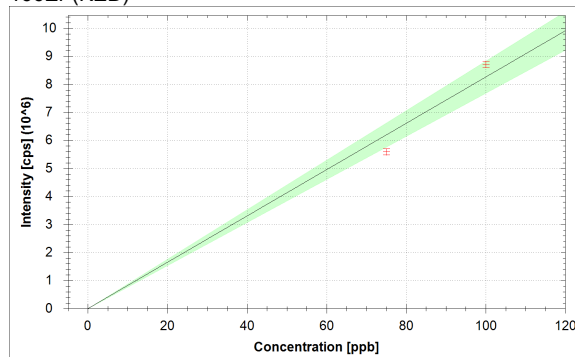
¹⁶⁴Dy (KED)

$$f(x) = 68674.9652 \cdot x + 45.0400$$

$$R^2 = 0.9912$$

$$\text{BEC} = 0.001 \text{ ppb}$$

$$\text{LoD} = 0.0007 \text{ ppb}$$

¹⁶⁶Er (KED)

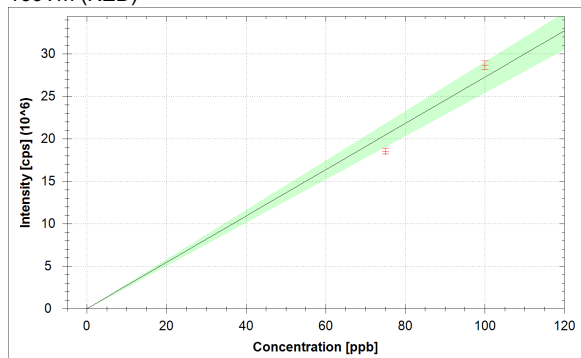
$$f(x) = 82606.9809 \cdot x + 291.1682$$

$$R^2 = 0.9897$$

$$\text{BEC} = 0.004 \text{ ppb}$$

$$\text{LoD} = 0.0013 \text{ ppb}$$

169Tm (KED)



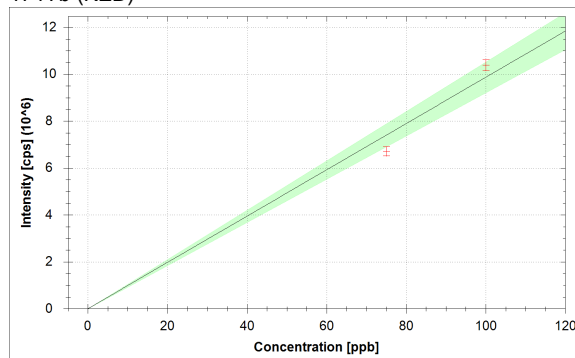
$$f(x) = 272542.4246 \cdot x + 103.3229$$

$$R^2 = 0.9907$$

$$\text{BEC} = 0.000 \text{ ppb}$$

$$\text{LoD} = 0.0002 \text{ ppb}$$

174Yb (KED)



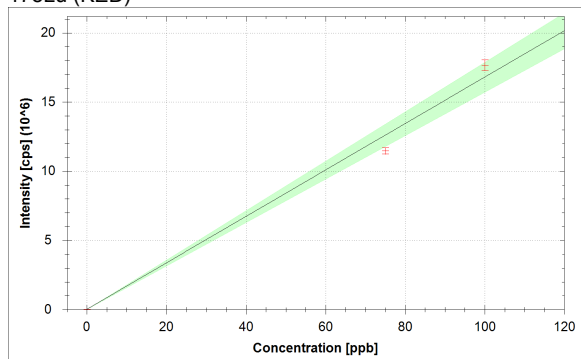
$$f(x) = 98651.7827 \cdot x + 69.7120$$

$$R^2 = 0.9906$$

$$\text{BEC} = 0.001 \text{ ppb}$$

$$\text{LoD} = 0.0001 \text{ ppb}$$

175Lu (KED)



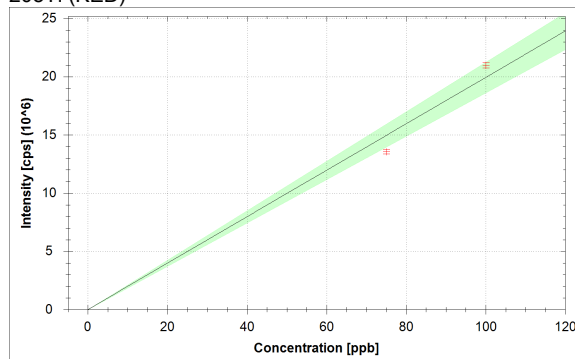
$$f(x) = 167789.6008 \cdot x + 20663.3833$$

$$R^2 = 0.9911$$

$$\text{BEC} = 0.123 \text{ ppb}$$

$$\text{LoD} = 0.0054 \text{ ppb}$$

205Tl (KED)



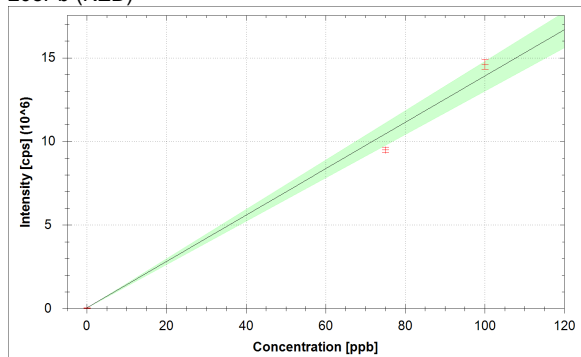
$$f(x) = 199364.8187 \cdot x + 62.6657$$

$$R^2 = 0.9907$$

$$\text{BEC} = 0.000 \text{ ppb}$$

$$\text{LoD} = 0.0003 \text{ ppb}$$

208Pb (KED)



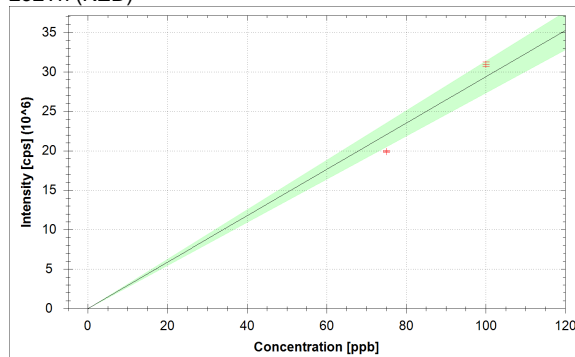
$$f(x) = 138640.2642 \cdot x + 42007.7715$$

$$R^2 = 0.9912$$

$$\text{BEC} = 0.303 \text{ ppb}$$

$$\text{LoD} = 0.0812 \text{ ppb}$$

232Th (KED)



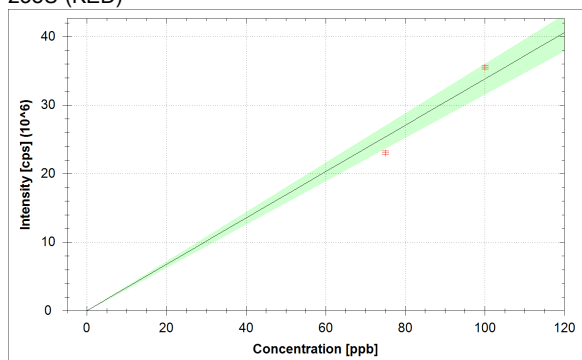
$$f(x) = 293639.7934 \cdot x + 2893.4840$$

$$R^2 = 0.9899$$

$$\text{BEC} = 0.010 \text{ ppb}$$

$$\text{LoD} = 0.0026 \text{ ppb}$$

238U (KED)



$$f(x) = 337970.7500 \cdot x + 1372.0453$$

$$R^2 = 0.9910$$

$$\text{BEC} = 0.004 \text{ ppb}$$

$$\text{LoD} = 0.0013 \text{ ppb}$$

Standards:

Analysis Index: 3
 Analysis Name: 0+20
 Analysis Type: STD
 Analysis Started at: 9/30/2021 11:33:44 AM
 Standard (Stock): std0
 Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
6Li (KED)	99.545 %		
9Be (KED)	0.000 ppb		0.000 ppb
11B (KED)	0.000 ppb	0.0 %	0.000 ppb
24Mg (KED)	0.000 ppb	0.0 %	0.000 ppb
27Al (KED)	0.000 ppb	0.2 %	0.000 ppb
45Sc (KED)	101.200 %		
51V (KED)	0.000 ppb	0.3 %	0.000 ppb
52Cr (KED)	0.000 ppb	0.1 %	0.000 ppb
55Mn (KED)	0.000 ppb	0.2 %	0.000 ppb
56Fe (KED)	0.000 ppb	0.1 %	0.000 ppb
58Ni (KED)	0.000 ppb	0.1 %	0.000 ppb
59Co (KED)	0.000 ppb	0.2 %	0.000 ppb
63Cu (KED)	0.000 ppb	0.1 %	0.000 ppb
64Zn (KED)	0.000 ppb	0.0 %	0.000 ppb
69Ga (KED)	0.000 ppb	0.1 %	0.000 ppb
75As (KED)	0.000 ppb	0.1 %	0.000 ppb
80Se (KED)	0.000 ppb	0.1 %	0.000 ppb
85Rb (KED)	0.000 ppb	0.6 %	0.000 ppb
88Sr (KED)	0.000 ppb	0.1 %	0.000 ppb
89Y (KED)	98.866 %		
107Ag (KED)	0.000 ppb	0.1 %	0.000 ppb
114Cd (KED)	0.000 ppb	0.1 %	0.000 ppb
115In (KED)	99.833 %		
133Cs (KED)	0.000 ppb	0.2 %	0.000 ppb
138Ba (KED)	0.000 ppb	0.1 %	0.000 ppb
139La (KED)	0.000 ppb	0.1 %	0.000 ppb
140Ce (KED)	0.000 ppb	0.2 %	0.000 ppb
141Pr (KED)	0.000 ppb	0.4 %	0.000 ppb
142Nd (KED)	0.000 ppb	0.2 %	0.000 ppb
152Sm (KED)	0.000 ppb	0.1 %	0.000 ppb
153Eu (KED)	0.000 ppb	0.3 %	0.000 ppb
158Gd (KED)	0.000 ppb	0.1 %	0.000 ppb
159Tb (KED)	98.828 %		
164Dy (KED)	0.000 ppb	0.3 %	0.000 ppb
166Er (KED)	0.000 ppb	0.1 %	0.000 ppb
169Tm (KED)	0.000 ppb	0.2 %	0.000 ppb
174Yb (KED)	0.000 ppb	0.1 %	0.000 ppb
175Lu (KED)	0.000 ppb	0.0 %	0.000 ppb
205Tl (KED)	0.000 ppb	0.1 %	0.000 ppb
208Pb (KED)	0.000 ppb	0.0 %	0.000 ppb
209Bi (KED)	99.327 %		
232Th (KED)	0.000 ppb	0.0 %	0.000 ppb
238U (KED)	0.000 ppb	0.1 %	0.000 ppb

Standards:

Analysis Index: 4
 Analysis Name: 50+20
 Analysis Type: STD
 Analysis Started at: 9/30/2021 11:36:49 AM
 Standard (Stock): std1
 Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
6Li (KED)	104.869 %		
9Be (KED)	69.554 ppb	8.0 %	75.000 ppb
11B (KED)	93.012 ppb	8.7 %	75.000 ppb
24Mg (KED)	68.084 ppb	7.0 %	75.000 ppb
27Al (KED)	70.533 ppb	2.3 %	75.000 ppb
45Sc (KED)	104.799 %		
51V (KED)	68.999 ppb	0.8 %	75.000 ppb
52Cr (KED)	69.238 ppb	1.3 %	75.000 ppb
55Mn (KED)	68.927 ppb	2.3 %	75.000 ppb
56Fe (KED)	69.065 ppb	1.2 %	75.000 ppb
58Ni (KED)	69.661 ppb	1.9 %	75.000 ppb
59Co (KED)	69.203 ppb	2.4 %	75.000 ppb
63Cu (KED)	68.438 ppb	0.3 %	75.000 ppb
64Zn (KED)	67.883 ppb	0.6 %	75.000 ppb
69Ga (KED)	67.385 ppb	0.8 %	75.000 ppb
75As (KED)	68.018 ppb	1.1 %	75.000 ppb
80Se (KED)	67.227 ppb	1.9 %	75.000 ppb
85Rb (KED)	67.839 ppb	0.1 %	75.000 ppb
88Sr (KED)	67.806 ppb	0.4 %	75.000 ppb
89Y (KED)	104.370 %		
107Ag (KED)	69.336 ppb	0.8 %	75.000 ppb
114Cd (KED)	69.205 ppb	0.5 %	75.000 ppb
115In (KED)	103.935 %		
133Cs (KED)	68.982 ppb	1.3 %	75.000 ppb
138Ba (KED)	70.158 ppb	2.6 %	75.000 ppb
139La (KED)	69.067 ppb	3.0 %	75.000 ppb
140Ce (KED)	69.330 ppb	2.5 %	75.000 ppb
141Pr (KED)	69.598 ppb	2.5 %	75.000 ppb
142Nd (KED)	69.966 ppb	2.9 %	75.000 ppb
152Sm (KED)	69.723 ppb	1.1 %	75.000 ppb
153Eu (KED)	68.562 ppb	2.2 %	75.000 ppb
158Gd (KED)	68.853 ppb	1.1 %	75.000 ppb
159Tb (KED)	103.741 %		
164Dy (KED)	68.197 ppb	1.2 %	75.000 ppb
166Er (KED)	67.655 ppb	2.0 %	75.000 ppb
169Tm (KED)	68.022 ppb	1.9 %	75.000 ppb
174Yb (KED)	67.963 ppb	3.0 %	75.000 ppb
175Lu (KED)	68.186 ppb	2.0 %	75.000 ppb
205Tl (KED)	68.010 ppb	1.4 %	75.000 ppb
208Pb (KED)	68.193 ppb	1.6 %	75.000 ppb
209Bi (KED)	103.629 %		
232Th (KED)	67.728 ppb	0.6 %	75.000 ppb
238U (KED)	68.122 ppb	1.2 %	75.000 ppb

Comprehensive

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Standards:

Analysis Index: 5
Analysis Name: 100+20
Analysis Type: STD
Analysis Started at: 9/30/2021 11:40:10 AM
Standard (Stock): std2
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
6Li (KED)	100.637 %		
9Be (KED)	104.085 ppb	6.5 %	100.000 ppb
11B (KED)	86.491 ppb	7.7 %	100.000 ppb
24Mg (KED)	105.187 ppb	5.9 %	100.000 ppb
27Al (KED)	103.350 ppb	1.6 %	100.000 ppb
45Sc (KED)	101.878 %		
51V (KED)	104.501 ppb	2.2 %	100.000 ppb
52Cr (KED)	104.322 ppb	2.2 %	100.000 ppb
55Mn (KED)	104.555 ppb	2.1 %	100.000 ppb
56Fe (KED)	104.451 ppb	2.1 %	100.000 ppb
58Ni (KED)	104.004 ppb	1.5 %	100.000 ppb
59Co (KED)	104.348 ppb	0.7 %	100.000 ppb
63Cu (KED)	104.921 ppb	1.1 %	100.000 ppb
64Zn (KED)	105.338 ppb	1.7 %	100.000 ppb
69Ga (KED)	105.711 ppb	1.3 %	100.000 ppb
75As (KED)	105.237 ppb	1.0 %	100.000 ppb
80Se (KED)	105.830 ppb	1.4 %	100.000 ppb
85Rb (KED)	105.371 ppb	1.4 %	100.000 ppb
88Sr (KED)	105.395 ppb	1.6 %	100.000 ppb
89Y (KED)	100.091 %		
107Ag (KED)	104.248 ppb	2.4 %	100.000 ppb
114Cd (KED)	104.347 ppb	1.1 %	100.000 ppb
115In (KED)	101.283 %		
133Cs (KED)	104.513 ppb	0.9 %	100.000 ppb
138Ba (KED)	103.631 ppb	3.1 %	100.000 ppb
139La (KED)	104.450 ppb	4.5 %	100.000 ppb
140Ce (KED)	104.252 ppb	4.9 %	100.000 ppb
141Pr (KED)	104.051 ppb	3.6 %	100.000 ppb
142Nd (KED)	103.776 ppb	3.4 %	100.000 ppb
152Sm (KED)	103.958 ppb	2.6 %	100.000 ppb
153Eu (KED)	104.828 ppb	1.7 %	100.000 ppb
158Gd (KED)	104.610 ppb	1.9 %	100.000 ppb
159Tb (KED)	103.043 %		
164Dy (KED)	105.102 ppb	1.3 %	100.000 ppb
166Er (KED)	105.509 ppb	1.2 %	100.000 ppb
169Tm (KED)	105.234 ppb	1.7 %	100.000 ppb
174Yb (KED)	105.278 ppb	2.3 %	100.000 ppb
175Lu (KED)	105.110 ppb	2.1 %	100.000 ppb
205Tl (KED)	105.242 ppb	1.1 %	100.000 ppb
208Pb (KED)	105.106 ppb	2.1 %	100.000 ppb
209Bi (KED)	102.058 %		
232Th (KED)	105.454 ppb	1.0 %	100.000 ppb
238U (KED)	105.159 ppb	0.8 %	100.000 ppb

Sample List Summary:

Instrument ID: iCAP Q

Index:	Label:	Main Runs:	Survey Runs:	Start Time:	User name:
1	water	3	0	9/30/2021 11:27:34 AM	WINDOWS-UPCI4ER\Administrator
2	blk	3	0	9/30/2021 11:30:30 AM	WINDOWS-UPCI4ER\Administrator
3	0+20	3	0	9/30/2021 11:33:44 AM	WINDOWS-UPCI4ER\Administrator
4	50+20	3	0	9/30/2021 11:36:49 AM	WINDOWS-UPCI4ER\Administrator
5	100+20	3	0	9/30/2021 11:40:10 AM	WINDOWS-UPCI4ER\Administrator
6	024750(17847)jian	3	0	9/30/2021 11:43:39 AM	WINDOWS-UPCI4ER\Administrator
7	028425(027)jian	3	0	9/30/2021 11:47:16 AM	WINDOWS-UPCI4ER\Administrator
8	046127(179227)	3	0	9/30/2021 11:50:36 AM	WINDOWS-UPCI4ER\Administrator
9	179184jian	3	0	9/30/2021 11:54:03 AM	WINDOWS-UPCI4ER\Administrator
10	033915(179178)jian	3	0	9/30/2021 11:57:44 AM	WINDOWS-UPCI4ER\Administrator
11	046214(179142)jian	3	0	9/30/2021 12:01:28 PM	WINDOWS-UPCI4ER\Administrator
12	179224jian	3	0	9/30/2021 12:09:14 PM	WINDOWS-UPCI4ER\Administrator
13	047600(178548)jian	3	0	9/30/2021 12:14:46 PM	WINDOWS-UPCI4ER\Administrator
14	179410jian	3	0	9/30/2021 12:19:07 PM	WINDOWS-UPCI4ER\Administrator
15	047668(178626)jian	3	0	9/30/2021 12:23:24 PM	WINDOWS-UPCI4ER\Administrator
16	026367(179413)jian	3	0	9/30/2021 12:27:47 PM	WINDOWS-UPCI4ER\Administrator
17	028529(178579)jian	3	0	9/30/2021 12:32:59 PM	WINDOWS-UPCI4ER\Administrator
18	047678(178591)jian	3	0	9/30/2021 12:37:34 PM	WINDOWS-UPCI4ER\Administrator
19	029245(179423)jian	3	0	9/30/2021 12:41:41 PM	WINDOWS-UPCI4ER\Administrator
20	178562jian	3	0	9/30/2021 12:46:34 PM	WINDOWS-UPCI4ER\Administrator
21	048723(178655)jian	3	0	9/30/2021 12:50:46 PM	WINDOWS-UPCI4ER\Administrator
22	178640jian	3	0	9/30/2021 1:29:11 PM	WINDOWS-UPCI4ER\Administrator
23	026370(1786187)jian	3	0	9/30/2021 1:33:40 PM	WINDOWS-UPCI4ER\Administrator
24	028762(178646)jian	3	0	9/30/2021 1:38:20 PM	WINDOWS-UPCI4ER\Administrator
25	048732(179400)jian	3	0	9/30/2021 1:42:35 PM	WINDOWS-UPCI4ER\Administrator
26	047672(179380)jian	1	0	9/30/2021 1:46:34 PM	WINDOWS-UPCI4ER\Administrator
27	028423(178578)jian	1	0	9/30/2021 1:49:16 PM	WINDOWS-UPCI4ER\Administrator
28	178600jian	1	0	9/30/2021 1:51:58 PM	WINDOWS-UPCI4ER\Administrator
29	14ti	1	0	9/30/2021 1:54:54 PM	WINDOWS-UPCI4ER\Administrator

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 1

Analysis name: water

Analysis started at: 9/30/2021 11:27:34 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	0.091 %	86.6 %
11B (KED)	Infinity ppb	
24Mg (KED)	Infinity ppb	
27Al (KED)	178.755 ppb	131.0 %
45Sc (KED)	0.046 %	39.0 %
51V (KED)	0.985 ppb	100.3 %
52Cr (KED)	3.878 ppb	82.5 %
55Mn (KED)	4.965 ppb	79.7 %
56Fe (KED)	165.757 ppb	87.4 %
58Ni (KED)	35.580 ppb	37.2 %
59Co (KED)	-0.003 ppb	0.0 %
63Cu (KED)	38.309 ppb	56.6 %
64Zn (KED)	776.457 ppb	28.1 %
69Ga (KED)	3.593 ppb	174.0 %
75As (KED)	46.903 ppb	111.6 %
80Se (KED)	44,199.435 ppb	27.3 %
85Rb (KED)	3.587 ppb	173.5 %
88Sr (KED)	6.235 ppb	93.0 %
89Y (KED)	0.008 %	31.6 %
107Ag (KED)	3.217 ppb	48.1 %
114Cd (KED)	2.630 ppb	173.5 %
115In (KED)	0.005 %	9.9 %
133Cs (KED)	1.491 ppb	87.6 %
138Ba (KED)	12.242 ppb	23.5 %
139La (KED)	-0.002 ppb	0.0 %
140Ce (KED)	0.585 ppb	25.7 %
141Pr (KED)	-0.001 ppb	0.0 %
142Nd (KED)	1.157 ppb	99.3 %
152Sm (KED)	0.312 ppb	173.6 %
153Eu (KED)	-0.001 ppb	0.0 %
158Gd (KED)	-0.001 ppb	0.0 %
159Tb (KED)	0.007 %	16.6 %
164Dy (KED)	-0.001 ppb	0.0 %
166Er (KED)	0.162 ppb	177.0 %
169Tm (KED)	0.000 ppb	0.0 %
174Yb (KED)	-0.001 ppb	0.0 %
175Lu (KED)	-0.123 ppb	0.0 %
205Tl (KED)	0.554 ppb	100.4 %
208Pb (KED)	5.808 ppb	74.1 %
209Bi (KED)	0.031 %	119.6 %
232Th (KED)	0.053 ppb	119.0 %
238U (KED)	0.032 ppb	195.2 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	0.091 %	2 cps	86.6 %
9Be (KED)		0 cps	
11B (KED)	Infinity ppb	11 cps	96.4 %
24Mg (KED)	Infinity ppb	34 cps	98.8 %
27Al (KED)	178.755 ppb	7 cps	100.0 %
45Sc (KED)	0.046 %	18 cps	39.0 %

Category	Concentration average	Intensity average	Intensity RSD
51V (KED)	0.985 ppb	2 cps	86.6 %
52Cr (KED)	3.878 ppb	14 cps	35.3 %
55Mn (KED)	4.965 ppb	10 cps	33.3 %
56Fe (KED)	165.757 ppb	559 cps	39.3 %
58Ni (KED)	35.580 ppb	173 cps	15.3 %
59Co (KED)	-0.003 ppb	0 cps	
63Cu (KED)	38.309 ppb	42 cps	50.8 %
64Zn (KED)	776.457 ppb	238 cps	17.8 %
69Ga (KED)	3.593 ppb	1 cps	173.2 %
75As (KED)	46.903 ppb	6 cps	124.9 %
80Se (KED)	44,199.435 ppb	1,197 cps	5.0 %
85Rb (KED)	3.587 ppb	1 cps	173.2 %
88Sr (KED)	6.235 ppb	3 cps	100.0 %
89Y (KED)	0.008 %	32 cps	31.6 %
107Ag (KED)	3.217 ppb	8 cps	49.5 %
114Cd (KED)	2.630 ppb	2 cps	173.2 %
115In (KED)	0.005 %	39 cps	9.9 %
133Cs (KED)	1.491 ppb	2 cps	86.6 %
138Ba (KED)	12.242 ppb	33 cps	26.5 %
139La (KED)	-0.002 ppb	0 cps	
140Ce (KED)	0.585 ppb	4 cps	43.3 %
141Pr (KED)	-0.001 ppb	0 cps	
142Nd (KED)	1.157 ppb	3 cps	100.0 %
152Sm (KED)	0.312 ppb	1 cps	173.2 %
153Eu (KED)	-0.001 ppb	0 cps	
158Gd (KED)	-0.001 ppb	0 cps	
159Tb (KED)	0.007 %	291 cps	16.6 %
164Dy (KED)	-0.001 ppb	0 cps	
166Er (KED)	0.162 ppb	1 cps	173.2 %
169Tm (KED)	0.000 ppb	0 cps	
174Yb (KED)	-0.001 ppb	0 cps	
175Lu (KED)	-0.123 ppb	0 cps	
205Tl (KED)	0.554 ppb	16 cps	53.9 %
208Pb (KED)	5.808 ppb	118 cps	11.4 %
209Bi (KED)	0.031 %	1,195 cps	119.6 %
232Th (KED)	0.053 ppb	6 cps	124.9 %
238U (KED)	0.032 ppb	9 cps	173.2 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 2

Analysis name: blk

Analysis started at: 9/30/2021 11:30:30 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	100.000 %	
9Be (KED)	0.000 ppb	
11B (KED)	-2.187 ppb	77.1 %
24Mg (KED)	-0.393 ppb	38.1 %
27Al (KED)	-0.266 ppb	66.0 %
45Sc (KED)	100.000 %	
51V (KED)	-0.002 ppb	20.0 %
52Cr (KED)	0.000 ppb	4,552.2 %
55Mn (KED)	-0.027 ppb	45.7 %
56Fe (KED)	-0.123 ppb	194.4 %
58Ni (KED)	0.002 ppb	360.0 %
59Co (KED)	0.001 ppb	75.5 %
63Cu (KED)	-0.003 ppb	351.8 %
64Zn (KED)	-0.058 ppb	128.1 %
69Ga (KED)	-0.007 ppb	31.9 %
75As (KED)	-0.002 ppb	216.3 %
80Se (KED)	-0.555 ppb	70.1 %
85Rb (KED)	-0.002 ppb	82.2 %
88Sr (KED)	-0.003 ppb	175.0 %
89Y (KED)	100.000 %	
107Ag (KED)	-0.001 ppb	94.3 %
114Cd (KED)	0.000 ppb	337.9 %
115In (KED)	100.000 %	
133Cs (KED)	0.001 ppb	60.5 %
138Ba (KED)	-0.017 ppb	54.0 %
139La (KED)	0.000 ppb	74.6 %
140Ce (KED)	-0.001 ppb	74.7 %
141Pr (KED)	0.000 ppb	57.1 %
142Nd (KED)	-0.001 ppb	24.0 %
152Sm (KED)	0.000 ppb	50.2 %
153Eu (KED)	0.000 ppb	46.0 %
158Gd (KED)	0.000 ppb	141.2 %
159Tb (KED)	100.000 %	
164Dy (KED)	0.000 ppb	1,920.0 %
166Er (KED)	0.001 ppb	79.7 %
169Tm (KED)	0.000 ppb	32.2 %
174Yb (KED)	0.000 ppb	12.7 %
175Lu (KED)	0.004 ppb	43.9 %
205Tl (KED)	0.000 ppb	170.0 %
208Pb (KED)	-0.079 ppb	34.1 %
209Bi (KED)	100.000 %	
232Th (KED)	-0.002 ppb	37.5 %
238U (KED)	-0.001 ppb	32.8 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	100.000 %	2,442 cps	8.7 %
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	-2.187 ppb	1,395 cps	4.7 %
24Mg (KED)	-0.393 ppb	421 cps	24.7 %
27Al (KED)	-0.266 ppb	120 cps	16.9 %

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	100.000 %	38,274 cps	0.4 %
51V (KED)	-0.002 ppb	11 cps	17.3 %
52Cr (KED)	0.000 ppb	187 cps	21.7 %
55Mn (KED)	-0.027 ppb	312 cps	21.8 %
56Fe (KED)	-0.123 ppb	6,272 cps	35.7 %
58Ni (KED)	0.002 ppb	457 cps	16.7 %
59Co (KED)	0.001 ppb	86 cps	21.5 %
63Cu (KED)	-0.003 ppb	749 cps	22.0 %
64Zn (KED)	-0.058 ppb	1,597 cps	19.7 %
69Ga (KED)	-0.007 ppb	50 cps	24.0 %
75As (KED)	-0.002 ppb	12 cps	41.7 %
80Se (KED)	-0.555 ppb	1,097 cps	10.8 %
85Rb (KED)	-0.002 ppb	21 cps	32.9 %
88Sr (KED)	-0.003 ppb	222 cps	16.5 %
89Y (KED)	100.000 %	389,496 cps	1.6 %
107Ag (KED)	-0.001 ppb	88 cps	38.2 %
114Cd (KED)	0.000 ppb	71 cps	17.7 %
115In (KED)	100.000 %	759,333 cps	1.9 %
133Cs (KED)	0.001 ppb	86 cps	12.5 %
138Ba (KED)	-0.017 ppb	1,679 cps	24.0 %
139La (KED)	0.000 ppb	109 cps	16.9 %
140Ce (KED)	-0.001 ppb	327 cps	28.2 %
141Pr (KED)	0.000 ppb	49 cps	23.9 %
142Nd (KED)	-0.001 ppb	68 cps	10.2 %
152Sm (KED)	0.000 ppb	24 cps	15.7 %
153Eu (KED)	0.000 ppb	36 cps	21.7 %
158Gd (KED)	0.000 ppb	26 cps	49.4 %
159Tb (KED)	100.000 %	4,257,954 cps	2.6 %
164Dy (KED)	0.000 ppb	44 cps	35.4 %
166Er (KED)	0.001 ppb	337 cps	12.6 %
169Tm (KED)	0.000 ppb	44 cps	45.8 %
174Yb (KED)	0.000 ppb	37 cps	9.1 %
175Lu (KED)	0.004 ppb	21,352 cps	3.3 %
205Tl (KED)	0.000 ppb	76 cps	29.4 %
208Pb (KED)	-0.079 ppb	31,019 cps	12.8 %
209Bi (KED)	100.000 %	3,894,885 cps	0.9 %
232Th (KED)	-0.002 ppb	2,218 cps	12.2 %
238U (KED)	-0.001 ppb	927 cps	16.5 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 3

Analysis name: 0+20

Analysis started at: 9/30/2021 11:33:44 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	99.545 %	
9Be (KED)	0.000 ppb	
11B (KED)	0.000 ppb	0.0 %
24Mg (KED)	0.000 ppb	0.0 %
27Al (KED)	0.000 ppb	0.2 %
45Sc (KED)	101.200 %	
51V (KED)	0.000 ppb	0.3 %
52Cr (KED)	0.000 ppb	0.1 %
55Mn (KED)	0.000 ppb	0.2 %
56Fe (KED)	0.000 ppb	0.1 %
58Ni (KED)	0.000 ppb	0.1 %
59Co (KED)	0.000 ppb	0.2 %
63Cu (KED)	0.000 ppb	0.1 %
64Zn (KED)	0.000 ppb	0.0 %
69Ga (KED)	0.000 ppb	0.1 %
75As (KED)	0.000 ppb	0.1 %
80Se (KED)	0.000 ppb	0.1 %
85Rb (KED)	0.000 ppb	0.6 %
88Sr (KED)	0.000 ppb	0.1 %
89Y (KED)	98.866 %	
107Ag (KED)	0.000 ppb	0.1 %
114Cd (KED)	0.000 ppb	0.1 %
115In (KED)	99.833 %	
133Cs (KED)	0.000 ppb	0.2 %
138Ba (KED)	0.000 ppb	0.1 %
139La (KED)	0.000 ppb	0.1 %
140Ce (KED)	0.000 ppb	0.2 %
141Pr (KED)	0.000 ppb	0.4 %
142Nd (KED)	0.000 ppb	0.2 %
152Sm (KED)	0.000 ppb	0.1 %
153Eu (KED)	0.000 ppb	0.3 %
158Gd (KED)	0.000 ppb	0.1 %
159Tb (KED)	98.828 %	
164Dy (KED)	0.000 ppb	0.3 %
166Er (KED)	0.000 ppb	0.1 %
169Tm (KED)	0.000 ppb	0.2 %
174Yb (KED)	0.000 ppb	0.1 %
175Lu (KED)	0.000 ppb	0.0 %
205Tl (KED)	0.000 ppb	0.1 %
208Pb (KED)	0.000 ppb	0.0 %
209Bi (KED)	99.327 %	
232Th (KED)	0.000 ppb	0.0 %
238U (KED)	0.000 ppb	0.1 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	99.545 %	2,431 cps	4.7 %
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	0.000 ppb	1,528 cps	4.8 %
24Mg (KED)	0.000 ppb	587 cps	6.6 %
27Al (KED)	0.000 ppb	152 cps	21.6 %

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	101.200 %	38,733 cps	1.7 %
51V (KED)	0.000 ppb	21 cps	32.9 %
52Cr (KED)	0.000 ppb	190 cps	15.8 %
55Mn (KED)	0.000 ppb	463 cps	14.9 %
56Fe (KED)	0.000 ppb	7,500 cps	7.5 %
58Ni (KED)	0.000 ppb	441 cps	9.6 %
59Co (KED)	0.000 ppb	62 cps	22.3 %
63Cu (KED)	0.000 ppb	782 cps	13.5 %
64Zn (KED)	0.000 ppb	1,799 cps	4.1 %
69Ga (KED)	0.000 ppb	84 cps	9.9 %
75As (KED)	0.000 ppb	14 cps	13.3 %
80Se (KED)	0.000 ppb	1,276 cps	7.5 %
85Rb (KED)	0.000 ppb	29 cps	63.5 %
88Sr (KED)	0.000 ppb	239 cps	10.1 %
89Y (KED)	98.866 %	385,078 cps	1.0 %
107Ag (KED)	0.000 ppb	121 cps	13.9 %
114Cd (KED)	0.000 ppb	74 cps	11.3 %
115In (KED)	99.833 %	758,067 cps	0.5 %
133Cs (KED)	0.000 ppb	68 cps	18.6 %
138Ba (KED)	0.000 ppb	2,305 cps	6.0 %
139La (KED)	0.000 ppb	128 cps	8.4 %
140Ce (KED)	0.000 ppb	432 cps	18.2 %
141Pr (KED)	0.000 ppb	67 cps	39.7 %
142Nd (KED)	0.000 ppb	92 cps	20.9 %
152Sm (KED)	0.000 ppb	31 cps	12.4 %
153Eu (KED)	0.000 ppb	51 cps	29.4 %
158Gd (KED)	0.000 ppb	33 cps	10.0 %
159Tb (KED)	98.828 %	4,208,065 cps	0.9 %
164Dy (KED)	0.000 ppb	44 cps	28.4 %
166Er (KED)	0.000 ppb	288 cps	6.6 %
169Tm (KED)	0.000 ppb	102 cps	21.7 %
174Yb (KED)	0.000 ppb	69 cps	5.6 %
175Lu (KED)	0.000 ppb	20,425 cps	3.7 %
205Tl (KED)	0.000 ppb	62 cps	11.2 %
208Pb (KED)	0.000 ppb	41,714 cps	4.4 %
209Bi (KED)	99.327 %	3,868,681 cps	2.5 %
232Th (KED)	0.000 ppb	2,873 cps	1.3 %
238U (KED)	0.000 ppb	1,362 cps	6.2 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 4

Analysis name: 50+20

Analysis started at: 9/30/2021 11:36:49 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	104.869 %	
9Be (KED)	69.554 ppb	8.0 %
11B (KED)	93.012 ppb	8.7 %
24Mg (KED)	68.084 ppb	7.0 %
27Al (KED)	70.533 ppb	2.3 %
45Sc (KED)	104.799 %	
51V (KED)	68.999 ppb	0.8 %
52Cr (KED)	69.238 ppb	1.3 %
55Mn (KED)	68.927 ppb	2.3 %
56Fe (KED)	69.065 ppb	1.2 %
58Ni (KED)	69.661 ppb	1.9 %
59Co (KED)	69.203 ppb	2.4 %
63Cu (KED)	68.438 ppb	0.3 %
64Zn (KED)	67.883 ppb	0.6 %
69Ga (KED)	67.385 ppb	0.8 %
75As (KED)	68.018 ppb	1.1 %
80Se (KED)	67.227 ppb	1.9 %
85Rb (KED)	67.839 ppb	0.1 %
88Sr (KED)	67.806 ppb	0.4 %
89Y (KED)	104.370 %	
107Ag (KED)	69.336 ppb	0.8 %
114Cd (KED)	69.205 ppb	0.5 %
115In (KED)	103.935 %	
133Cs (KED)	68.982 ppb	1.3 %
138Ba (KED)	70.158 ppb	2.6 %
139La (KED)	69.067 ppb	3.0 %
140Ce (KED)	69.330 ppb	2.5 %
141Pr (KED)	69.598 ppb	2.5 %
142Nd (KED)	69.966 ppb	2.9 %
152Sm (KED)	69.723 ppb	1.1 %
153Eu (KED)	68.562 ppb	2.2 %
158Gd (KED)	68.853 ppb	1.1 %
159Tb (KED)	103.741 %	
164Dy (KED)	68.197 ppb	1.2 %
166Er (KED)	67.655 ppb	2.0 %
169Tm (KED)	68.022 ppb	1.9 %
174Yb (KED)	67.963 ppb	3.0 %
175Lu (KED)	68.186 ppb	2.0 %
205Tl (KED)	68.010 ppb	1.4 %
208Pb (KED)	68.193 ppb	1.6 %
209Bi (KED)	103.629 %	
232Th (KED)	67.728 ppb	0.6 %
238U (KED)	68.122 ppb	1.2 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	104.869 %	2,561 cps	7.1 %
9Be (KED)	69.554 ppb	8,185 cps	3.7 %
11B (KED)	93.012 ppb	7,617 cps	2.6 %
24Mg (KED)	68.084 ppb	31,708 cps	0.8 %
27Al (KED)	70.533 ppb	8,637 cps	2.6 %

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	104.799 %	40,111 cps	0.6 %
51V (KED)	68.999 ppb	466,944 cps	0.8 %
52Cr (KED)	69.238 ppb	735,545 cps	1.3 %
55Mn (KED)	68.927 ppb	387,166 cps	2.3 %
56Fe (KED)	69.065 ppb	681,160 cps	1.1 %
58Ni (KED)	69.661 ppb	842,802 cps	1.6 %
59Co (KED)	69.203 ppb	1,414,459 cps	2.1 %
63Cu (KED)	68.438 ppb	1,032,052 cps	2.0 %
64Zn (KED)	67.883 ppb	278,024 cps	1.8 %
69Ga (KED)	67.385 ppb	361,401 cps	2.1 %
75As (KED)	68.018 ppb	82,286 cps	2.3 %
80Se (KED)	67.227 ppb	25,718 cps	3.9 %
85Rb (KED)	67.839 ppb	365,601 cps	2.4 %
88Sr (KED)	67.806 ppb	535,518 cps	2.7 %
89Y (KED)	104.370 %	406,518 cps	2.3 %
107Ag (KED)	69.336 ppb	3,367,892 cps	2.4 %
114Cd (KED)	69.205 ppb	1,256,884 cps	1.8 %
115In (KED)	103.935 %	789,214 cps	1.6 %
133Cs (KED)	68.982 ppb	2,039,457 cps	0.3 %
138Ba (KED)	70.158 ppb	2,888,447 cps	1.6 %
139La (KED)	69.067 ppb	5,779,407 cps	1.2 %
140Ce (KED)	69.330 ppb	7,721,891 cps	1.9 %
141Pr (KED)	69.598 ppb	8,284,239 cps	1.7 %
142Nd (KED)	69.966 ppb	3,359,174 cps	1.2 %
152Sm (KED)	69.723 ppb	3,152,897 cps	3.1 %
153Eu (KED)	68.562 ppb	6,191,651 cps	1.9 %
158Gd (KED)	68.853 ppb	4,193,233 cps	3.1 %
159Tb (KED)	103.741 %	4,417,228 cps	4.1 %
164Dy (KED)	68.197 ppb	4,857,216 cps	3.0 %
166Er (KED)	67.655 ppb	5,795,373 cps	2.5 %
169Tm (KED)	68.022 ppb	19,223,198 cps	2.4 %
174Yb (KED)	67.963 ppb	6,950,040 cps	1.3 %
175Lu (KED)	68.186 ppb	11,885,296 cps	2.8 %
205Tl (KED)	68.010 ppb	14,049,592 cps	2.3 %
208Pb (KED)	68.193 ppb	9,838,589 cps	1.2 %
209Bi (KED)	103.629 %	4,036,227 cps	2.4 %
232Th (KED)	67.728 ppb	20,610,558 cps	1.9 %
238U (KED)	68.122 ppb	23,857,625 cps	2.1 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 5

Analysis name: 100+20

Analysis started at: 9/30/2021 11:40:10 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	100.637 %	
9Be (KED)	104.085 ppb	6.5 %
11B (KED)	86.491 ppb	7.7 %
24Mg (KED)	105.187 ppb	5.9 %
27Al (KED)	103.350 ppb	1.6 %
45Sc (KED)	101.878 %	
51V (KED)	104.501 ppb	2.2 %
52Cr (KED)	104.322 ppb	2.2 %
55Mn (KED)	104.555 ppb	2.1 %
56Fe (KED)	104.451 ppb	2.1 %
58Ni (KED)	104.004 ppb	1.5 %
59Co (KED)	104.348 ppb	0.7 %
63Cu (KED)	104.921 ppb	1.1 %
64Zn (KED)	105.338 ppb	1.7 %
69Ga (KED)	105.711 ppb	1.3 %
75As (KED)	105.237 ppb	1.0 %
80Se (KED)	105.830 ppb	1.4 %
85Rb (KED)	105.371 ppb	1.4 %
88Sr (KED)	105.395 ppb	1.6 %
89Y (KED)	100.091 %	
107Ag (KED)	104.248 ppb	2.4 %
114Cd (KED)	104.347 ppb	1.1 %
115In (KED)	101.283 %	
133Cs (KED)	104.513 ppb	0.9 %
138Ba (KED)	103.631 ppb	3.1 %
139La (KED)	104.450 ppb	4.5 %
140Ce (KED)	104.252 ppb	4.9 %
141Pr (KED)	104.051 ppb	3.6 %
142Nd (KED)	103.776 ppb	3.4 %
152Sm (KED)	103.958 ppb	2.6 %
153Eu (KED)	104.828 ppb	1.7 %
158Gd (KED)	104.610 ppb	1.9 %
159Tb (KED)	103.043 %	
164Dy (KED)	105.102 ppb	1.3 %
166Er (KED)	105.509 ppb	1.2 %
169Tm (KED)	105.234 ppb	1.7 %
174Yb (KED)	105.278 ppb	2.3 %
175Lu (KED)	105.110 ppb	2.1 %
205Tl (KED)	105.242 ppb	1.1 %
208Pb (KED)	105.106 ppb	2.1 %
209Bi (KED)	102.058 %	
232Th (KED)	105.454 ppb	1.0 %
238U (KED)	105.159 ppb	0.8 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	100.637 %	2,458 cps	1.5 %
9Be (KED)	104.085 ppb	11,798 cps	7.5 %
11B (KED)	86.491 ppb	6,928 cps	6.8 %
24Mg (KED)	105.187 ppb	46,850 cps	6.4 %
27Al (KED)	103.350 ppb	12,232 cps	5.5 %

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	101.878 %	38,993 cps	5.2 %
51V (KED)	104.501 ppb	688,015 cps	7.3 %
52Cr (KED)	104.322 ppb	1,077,682 cps	6.5 %
55Mn (KED)	104.555 ppb	571,081 cps	7.2 %
56Fe (KED)	104.451 ppb	998,206 cps	7.0 %
58Ni (KED)	104.004 ppb	1,223,722 cps	6.6 %
59Co (KED)	104.348 ppb	2,073,879 cps	5.8 %
63Cu (KED)	104.921 ppb	1,516,620 cps	5.1 %
64Zn (KED)	105.338 ppb	413,007 cps	7.2 %
69Ga (KED)	105.711 ppb	543,805 cps	6.3 %
75As (KED)	105.237 ppb	122,080 cps	5.5 %
80Se (KED)	105.830 ppb	38,062 cps	5.0 %
85Rb (KED)	105.371 ppb	544,283 cps	4.4 %
88Sr (KED)	105.395 ppb	797,853 cps	5.2 %
89Y (KED)	100.091 %	389,849 cps	5.7 %
107Ag (KED)	104.248 ppb	4,932,718 cps	6.0 %
114Cd (KED)	104.347 ppb	1,846,786 cps	6.4 %
115In (KED)	101.283 %	769,077 cps	6.2 %
133Cs (KED)	104.513 ppb	3,010,904 cps	5.8 %
138Ba (KED)	103.631 ppb	4,240,522 cps	5.3 %
139La (KED)	104.450 ppb	8,692,327 cps	6.7 %
140Ce (KED)	104.252 ppb	11,543,122 cps	6.5 %
141Pr (KED)	104.051 ppb	12,310,954 cps	5.2 %
142Nd (KED)	103.776 ppb	4,952,586 cps	4.7 %
152Sm (KED)	103.958 ppb	4,670,725 cps	4.4 %
153Eu (KED)	104.828 ppb	9,406,410 cps	2.8 %
158Gd (KED)	104.610 ppb	6,328,791 cps	3.4 %
159Tb (KED)	103.043 %	4,387,518 cps	3.5 %
164Dy (KED)	105.102 ppb	7,435,360 cps	2.3 %
166Er (KED)	105.509 ppb	8,979,712 cps	2.9 %
169Tm (KED)	105.234 ppb	29,542,056 cps	1.9 %
174Yb (KED)	105.278 ppb	10,696,302 cps	1.3 %
175Lu (KED)	105.110 ppb	18,191,450 cps	3.4 %
205Tl (KED)	105.242 ppb	21,413,862 cps	2.3 %
208Pb (KED)	105.106 ppb	14,916,791 cps	3.5 %
209Bi (KED)	102.058 %	3,975,044 cps	1.9 %
232Th (KED)	105.454 ppb	31,602,572 cps	1.3 %
238U (KED)	105.159 ppb	36,274,486 cps	2.3 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 6

Analysis name: 024750(17847)jian

Analysis started at: 9/30/2021 11:43:39 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	76.116 %	88.2 %
9Be (KED)	14.532 ppb	172.0 %
11B (KED)	125.265 ppb	196.7 %
24Mg (KED)	224.533 ppb	67.9 %
27Al (KED)	303.652 ppb	52.4 %
45Sc (KED)	69.610 %	87.0 %
51V (KED)	22.051 ppb	167.3 %
52Cr (KED)	30.865 ppb	154.2 %
55Mn (KED)	27.701 ppb	110.2 %
56Fe (KED)	314.980 ppb	68.7 %
58Ni (KED)	23.684 ppb	154.7 %
59Co (KED)	21.155 ppb	171.2 %
63Cu (KED)	34.840 ppb	129.2 %
64Zn (KED)	144.559 ppb	7.5 %
69Ga (KED)	24.858 ppb	164.3 %
75As (KED)	38.395 ppb	171.1 %
80Se (KED)	1,505.717 ppb	173.2 %
85Rb (KED)	24.289 ppb	158.1 %
88Sr (KED)	22.217 ppb	136.1 %
89Y (KED)	69.413 %	86.8 %
107Ag (KED)	18.610 ppb	171.7 %
114Cd (KED)	24.765 ppb	172.6 %
115In (KED)	67.217 %	86.5 %
133Cs (KED)	18.485 ppb	171.9 %
138Ba (KED)	26.624 ppb	140.1 %
139La (KED)	32.438 ppb	170.4 %
140Ce (KED)	30.219 ppb	168.3 %
141Pr (KED)	28.488 ppb	171.2 %
142Nd (KED)	27.737 ppb	169.2 %
152Sm (KED)	26.806 ppb	171.0 %
153Eu (KED)	27.283 ppb	171.4 %
158Gd (KED)	27.692 ppb	171.3 %
159Tb (KED)	74.480 %	86.5 %
164Dy (KED)	26.367 ppb	171.3 %
166Er (KED)	25.772 ppb	171.4 %
169Tm (KED)	24.839 ppb	171.4 %
174Yb (KED)	26.591 ppb	171.5 %
175Lu (KED)	24.792 ppb	171.5 %
205Tl (KED)	25.969 ppb	172.8 %
208Pb (KED)	33.430 ppb	168.1 %
209Bi (KED)	62.968 %	86.6 %
232Th (KED)	22.784 ppb	162.8 %
238U (KED)	31.929 ppb	171.7 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	76.116 %	1,859 cps	88.2 %
9Be (KED)	14.532 ppb	10 cps	120.2 %
11B (KED)	125.265 ppb	376 cps	78.2 %
24Mg (KED)	224.533 ppb	103,836 cps	87.4 %
27Al (KED)	303.652 ppb	31,698 cps	87.3 %

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	69.610 %	26,643 cps	87.0 %
51V (KED)	22.051 ppb	3,500 cps	77.0 %
52Cr (KED)	30.865 ppb	24,286 cps	84.0 %
55Mn (KED)	27.701 ppb	37,950 cps	86.5 %
56Fe (KED)	314.980 ppb	2,855,429 cps	87.4 %
58Ni (KED)	23.684 ppb	20,798 cps	83.9 %
59Co (KED)	21.155 ppb	3,725 cps	59.3 %
63Cu (KED)	34.840 ppb	89,624 cps	86.0 %
64Zn (KED)	144.559 ppb	409,094 cps	87.1 %
69Ga (KED)	24.858 ppb	4,724 cps	80.9 %
75As (KED)	38.395 ppb	423 cps	63.8 %
80Se (KED)	1,505.717 ppb	1,381 cps	2.9 %
85Rb (KED)	24.289 ppb	7,687 cps	83.5 %
88Sr (KED)	22.217 ppb	25,253 cps	85.6 %
89Y (KED)	69.413 %	270,360 cps	86.8 %
107Ag (KED)	18.610 ppb	5,934 cps	64.2 %
114Cd (KED)	24.765 ppb	1,448 cps	33.5 %
115In (KED)	67.217 %	510,398 cps	86.5 %
133Cs (KED)	18.485 ppb	3,242 cps	52.2 %
138Ba (KED)	26.624 ppb	152,802 cps	85.2 %
139La (KED)	32.438 ppb	34,129 cps	88.4 %
140Ce (KED)	30.219 ppb	71,564 cps	85.7 %
141Pr (KED)	28.488 ppb	31,055 cps	116.6 %
142Nd (KED)	27.737 ppb	23,463 cps	92.0 %
152Sm (KED)	26.806 ppb	11,847 cps	124.0 %
153Eu (KED)	27.283 ppb	20,383 cps	134.9 %
158Gd (KED)	27.692 ppb	14,689 cps	121.0 %
159Tb (KED)	74.480 %	3,171,343 cps	86.5 %
164Dy (KED)	26.367 ppb	16,000 cps	124.5 %
166Er (KED)	25.772 ppb	18,041 cps	127.9 %
169Tm (KED)	24.839 ppb	57,110 cps	136.9 %
174Yb (KED)	26.591 ppb	21,017 cps	130.5 %
175Lu (KED)	24.792 ppb	48,793 cps	109.6 %
205Tl (KED)	25.969 ppb	10,426 cps	39.7 %
208Pb (KED)	33.430 ppb	116,388 cps	80.4 %
209Bi (KED)	62.968 %	2,452,513 cps	86.6 %
232Th (KED)	22.784 ppb	265,371 cps	150.7 %
238U (KED)	31.929 ppb	68,720 cps	120.4 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 7

Analysis name: 028425(027)jian

Analysis started at: 9/30/2021 11:47:16 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	118.156 %	18.5 %
9Be (KED)	0.051 ppb	20.6 %
11B (KED)	-18.476 ppb	1.7 %
24Mg (KED)	557.265 ppb	5.4 %
27Al (KED)	663.258 ppb	3.1 %
45Sc (KED)	109.312 %	12.6 %
51V (KED)	1.376 ppb	4.7 %
52Cr (KED)	3.823 ppb	2.8 %
55Mn (KED)	22.548 ppb	0.9 %
56Fe (KED)	849.421 ppb	0.6 %
58Ni (KED)	4.210 ppb	1.2 %
59Co (KED)	0.416 ppb	1.6 %
63Cu (KED)	10.643 ppb	3.8 %
64Zn (KED)	150.482 ppb	3.1 %
69Ga (KED)	1.743 ppb	6.2 %
75As (KED)	0.655 ppb	1.4 %
80Se (KED)	-0.292 ppb	164.3 %
85Rb (KED)	1.845 ppb	2.7 %
88Sr (KED)	8.764 ppb	0.9 %
89Y (KED)	103.182 %	7.6 %
107Ag (KED)	0.152 ppb	3.7 %
114Cd (KED)	0.057 ppb	7.1 %
115In (KED)	98.419 %	6.0 %
133Cs (KED)	0.160 ppb	3.2 %
138Ba (KED)	7.475 ppb	1.2 %
139La (KED)	0.705 ppb	1.3 %
140Ce (KED)	1.457 ppb	1.7 %
141Pr (KED)	0.175 ppb	2.5 %
142Nd (KED)	0.916 ppb	3.7 %
152Sm (KED)	0.140 ppb	4.7 %
153Eu (KED)	0.033 ppb	7.8 %
158Gd (KED)	0.122 ppb	4.4 %
159Tb (KED)	101.769 %	6.9 %
164Dy (KED)	0.086 ppb	6.3 %
166Er (KED)	0.046 ppb	4.2 %
169Tm (KED)	0.013 ppb	17.6 %
174Yb (KED)	0.038 ppb	11.3 %
175Lu (KED)	0.009 ppb	113.2 %
205Tl (KED)	0.025 ppb	8.7 %
208Pb (KED)	1.500 ppb	1.1 %
209Bi (KED)	87.925 %	5.5 %
232Th (KED)	0.258 ppb	6.0 %
238U (KED)	0.077 ppb	4.5 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	118.156 %	2,886 cps	18.5 %
9Be (KED)	0.051 ppb	7 cps	0.0 %
11B (KED)	-18.476 ppb	464 cps	20.3 %
24Mg (KED)	557.265 ppb	286,552 cps	14.1 %
27Al (KED)	663.258 ppb	83,549 cps	15.4 %

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	109.312 %	41,838 cps	12.6 %
51V (KED)	1.376 ppb	9,771 cps	16.9 %
52Cr (KED)	3.823 ppb	42,660 cps	15.2 %
55Mn (KED)	22.548 ppb	132,546 cps	13.4 %
56Fe (KED)	849.421 ppb	8,646,823 cps	12.6 %
58Ni (KED)	4.210 ppb	53,594 cps	13.1 %
59Co (KED)	0.416 ppb	8,919 cps	11.2 %
63Cu (KED)	10.643 ppb	159,657 cps	11.0 %
64Zn (KED)	150.482 ppb	607,983 cps	10.5 %
69Ga (KED)	1.743 ppb	9,353 cps	13.1 %
75As (KED)	0.655 ppb	799 cps	7.9 %
80Se (KED)	-0.292 ppb	1,219 cps	6.0 %
85Rb (KED)	1.845 ppb	9,863 cps	8.3 %
88Sr (KED)	8.764 ppb	68,641 cps	7.5 %
89Y (KED)	103.182 %	401,888 cps	7.6 %
107Ag (KED)	0.152 ppb	7,103 cps	2.5 %
114Cd (KED)	0.057 ppb	1,058 cps	3.3 %
115In (KED)	98.419 %	747,326 cps	6.0 %
133Cs (KED)	0.160 ppb	4,545 cps	3.8 %
138Ba (KED)	7.475 ppb	304,296 cps	7.4 %
139La (KED)	0.705 ppb	58,013 cps	5.9 %
140Ce (KED)	1.457 ppb	159,621 cps	5.5 %
141Pr (KED)	0.175 ppb	20,533 cps	4.6 %
142Nd (KED)	0.916 ppb	43,235 cps	4.6 %
152Sm (KED)	0.140 ppb	6,213 cps	2.8 %
153Eu (KED)	0.033 ppb	2,978 cps	2.4 %
158Gd (KED)	0.122 ppb	7,289 cps	3.3 %
159Tb (KED)	101.769 %	4,333,297 cps	6.9 %
164Dy (KED)	0.086 ppb	6,027 cps	1.0 %
166Er (KED)	0.046 ppb	4,171 cps	3.3 %
169Tm (KED)	0.013 ppb	3,609 cps	9.9 %
174Yb (KED)	0.038 ppb	3,861 cps	5.2 %
175Lu (KED)	0.009 ppb	22,471 cps	3.2 %
205Tl (KED)	0.025 ppb	4,435 cps	3.4 %
208Pb (KED)	1.500 ppb	219,805 cps	6.3 %
209Bi (KED)	87.925 %	3,424,591 cps	5.5 %
232Th (KED)	0.258 ppb	69,100 cps	0.1 %
238U (KED)	0.077 ppb	23,972 cps	3.2 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 8

Analysis name: 046127(179227)

Analysis started at: 9/30/2021 11:50:36 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	119.475 %	5.0 %
9Be (KED)	0.074 ppb	5.1 %
11B (KED)	-11.600 ppb	9.0 %
24Mg (KED)	1,246.622 ppb	4.8 %
27Al (KED)	1,636.118 ppb	2.0 %
45Sc (KED)	120.704 %	1.4 %
51V (KED)	3.081 ppb	0.6 %
52Cr (KED)	4.786 ppb	0.7 %
55Mn (KED)	42.227 ppb	1.6 %
56Fe (KED)	1,911.735 ppb	1.0 %
58Ni (KED)	9.216 ppb	0.7 %
59Co (KED)	0.846 ppb	0.4 %
63Cu (KED)	13.701 ppb	0.6 %
64Zn (KED)	148.585 ppb	1.8 %
69Ga (KED)	3.323 ppb	2.3 %
75As (KED)	0.912 ppb	5.9 %
80Se (KED)	-0.529 ppb	9.4 %
85Rb (KED)	3.769 ppb	1.5 %
88Sr (KED)	16.231 ppb	2.7 %
89Y (KED)	110.499 %	1.3 %
107Ag (KED)	0.062 ppb	4.6 %
114Cd (KED)	0.064 ppb	12.4 %
115In (KED)	99.234 %	1.6 %
133Cs (KED)	0.374 ppb	2.0 %
138Ba (KED)	13.583 ppb	1.7 %
139La (KED)	1.592 ppb	0.9 %
140Ce (KED)	3.228 ppb	2.0 %
141Pr (KED)	0.393 ppb	1.8 %
142Nd (KED)	2.034 ppb	2.4 %
152Sm (KED)	0.295 ppb	3.8 %
153Eu (KED)	0.066 ppb	4.8 %
158Gd (KED)	0.257 ppb	0.5 %
159Tb (KED)	102.395 %	0.8 %
164Dy (KED)	0.181 ppb	5.5 %
166Er (KED)	0.093 ppb	1.3 %
169Tm (KED)	0.020 ppb	9.9 %
174Yb (KED)	0.075 ppb	4.7 %
175Lu (KED)	0.012 ppb	55.6 %
205Tl (KED)	0.037 ppb	7.5 %
208Pb (KED)	2.606 ppb	2.1 %
209Bi (KED)	86.961 %	2.6 %
232Th (KED)	0.593 ppb	0.8 %
238U (KED)	0.139 ppb	0.9 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	119.475 %	2,918 cps	5.0 %
9Be (KED)	0.074 ppb	10 cps	0.0 %
11B (KED)	-11.600 ppb	976 cps	6.8 %
24Mg (KED)	1,246.622 ppb	650,393 cps	1.1 %
27Al (KED)	1,636.118 ppb	226,688 cps	1.1 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	120.704 %	46,199 cps	1.4 %
51V (KED)	3.081 ppb	24,039 cps	1.4 %
52Cr (KED)	4.786 ppb	58,775 cps	1.5 %
55Mn (KED)	42.227 ppb	273,365 cps	0.3 %
56Fe (KED)	1,911.735 ppb	21,476,899 cps	1.1 %
58Ni (KED)	9.216 ppb	128,875 cps	0.7 %
59Co (KED)	0.846 ppb	19,979 cps	1.7 %
63Cu (KED)	13.701 ppb	219,457 cps	1.8 %
64Zn (KED)	148.585 ppb	641,879 cps	1.3 %
69Ga (KED)	3.323 ppb	18,957 cps	1.8 %
75As (KED)	0.912 ppb	1,185 cps	6.6 %
80Se (KED)	-0.529 ppb	1,223 cps	2.1 %
85Rb (KED)	3.769 ppb	21,530 cps	0.5 %
88Sr (KED)	16.231 ppb	135,883 cps	1.8 %
89Y (KED)	110.499 %	430,391 cps	1.3 %
107Ag (KED)	0.062 ppb	3,013 cps	5.9 %
114Cd (KED)	0.064 ppb	1,186 cps	12.9 %
115In (KED)	99.234 %	753,515 cps	1.6 %
133Cs (KED)	0.374 ppb	10,616 cps	3.2 %
138Ba (KED)	13.583 ppb	554,263 cps	1.3 %
139La (KED)	1.592 ppb	131,689 cps	0.3 %
140Ce (KED)	3.228 ppb	355,486 cps	1.7 %
141Pr (KED)	0.393 ppb	46,265 cps	2.0 %
142Nd (KED)	2.034 ppb	96,588 cps	3.2 %
152Sm (KED)	0.295 ppb	13,206 cps	4.1 %
153Eu (KED)	0.066 ppb	5,926 cps	4.6 %
158Gd (KED)	0.257 ppb	15,464 cps	0.5 %
159Tb (KED)	102.395 %	4,359,938 cps	0.8 %
164Dy (KED)	0.181 ppb	12,779 cps	5.9 %
166Er (KED)	0.093 ppb	8,203 cps	1.2 %
169Tm (KED)	0.020 ppb	5,684 cps	9.6 %
174Yb (KED)	0.075 ppb	7,673 cps	4.4 %
175Lu (KED)	0.012 ppb	23,232 cps	4.6 %
205Tl (KED)	0.037 ppb	6,496 cps	9.2 %
208Pb (KED)	2.606 ppb	350,664 cps	1.0 %
209Bi (KED)	86.961 %	3,387,036 cps	2.6 %
232Th (KED)	0.593 ppb	153,983 cps	2.9 %
238U (KED)	0.139 ppb	42,160 cps	3.4 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 9

Analysis name: 179184jian

Analysis started at: 9/30/2021 11:54:03 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	0.136 %	0.0 %
9Be (KED)	0.000 ppb	
11B (KED)	54.191 ppb	72.9 %
24Mg (KED)	35.922 ppb	114.7 %
27Al (KED)	981.111 ppb	48.2 %
45Sc (KED)	0.017 %	50.0 %
51V (KED)	4.278 ppb	104.1 %
52Cr (KED)	12.990 ppb	55.1 %
55Mn (KED)	25.336 ppb	14.4 %
56Fe (KED)	497.938 ppb	70.0 %
58Ni (KED)	18.943 ppb	27.1 %
59Co (KED)	2.722 ppb	70.4 %
63Cu (KED)	171.826 ppb	107.4 %
64Zn (KED)	887.405 ppb	102.1 %
69Ga (KED)	21.145 ppb	124.2 %
75As (KED)	365.659 ppb	152.2 %
80Se (KED)	159,593.880 ppb	131.4 %
85Rb (KED)	38.327 ppb	96.0 %
88Sr (KED)	32.347 ppb	62.4 %
89Y (KED)	0.014 %	136.2 %
107Ag (KED)	4.008 ppb	53.7 %
114Cd (KED)	2.188 ppb	62.7 %
115In (KED)	0.029 %	47.3 %
133Cs (KED)	3.972 ppb	108.6 %
138Ba (KED)	11.376 ppb	24.9 %
139La (KED)	3.573 ppb	53.7 %
140Ce (KED)	5.750 ppb	30.7 %
141Pr (KED)	8.690 ppb	83.1 %
142Nd (KED)	8.002 ppb	45.5 %
152Sm (KED)	3.837 ppb	153.4 %
153Eu (KED)	5.757 ppb	61.6 %
158Gd (KED)	5.562 ppb	136.2 %
159Tb (KED)	0.013 %	140.1 %
164Dy (KED)	4.470 ppb	149.1 %
166Er (KED)	2.809 ppb	155.5 %
169Tm (KED)	4.812 ppb	68.1 %
174Yb (KED)	5.468 ppb	83.3 %
175Lu (KED)	2.981 ppb	102.1 %
205Tl (KED)	16.291 ppb	62.3 %
208Pb (KED)	39.125 ppb	55.3 %
209Bi (KED)	0.010 %	93.8 %
232Th (KED)	2.471 ppb	28.7 %
238U (KED)	2.856 ppb	51.7 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	0.136 %	3 cps	0.0 %
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	54.191 ppb	7 cps	50.0 %
24Mg (KED)	35.922 ppb	22 cps	110.6 %
27Al (KED)	981.111 ppb	21 cps	91.2 %

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	0.017 %	7 cps	50.0 %
51V (KED)	4.278 ppb	6 cps	91.7 %
52Cr (KED)	12.990 ppb	20 cps	57.7 %
55Mn (KED)	25.336 ppb	23 cps	51.5 %
56Fe (KED)	497.938 ppb	988 cps	105.6 %
58Ni (KED)	18.943 ppb	38 cps	48.6 %
59Co (KED)	2.722 ppb	9 cps	78.1 %
63Cu (KED)	171.826 ppb	80 cps	38.2 %
64Zn (KED)	887.405 ppb	130 cps	54.0 %
69Ga (KED)	21.145 ppb	12 cps	95.8 %
75As (KED)	365.659 ppb	9 cps	57.3 %
80Se (KED)	159,593.880 ppb	1,218 cps	2.2 %
85Rb (KED)	38.327 ppb	6 cps	69.3 %
88Sr (KED)	32.347 ppb	16 cps	86.6 %
89Y (KED)	0.014 %	53 cps	136.2 %
107Ag (KED)	4.008 ppb	49 cps	47.9 %
114Cd (KED)	2.188 ppb	9 cps	21.7 %
115In (KED)	0.029 %	219 cps	47.3 %
133Cs (KED)	3.972 ppb	24 cps	68.6 %
138Ba (KED)	11.376 ppb	47 cps	124.5 %
139La (KED)	3.573 ppb	26 cps	108.6 %
140Ce (KED)	5.750 ppb	74 cps	131.5 %
141Pr (KED)	8.690 ppb	49 cps	63.0 %
142Nd (KED)	8.002 ppb	28 cps	102.1 %
152Sm (KED)	3.837 ppb	10 cps	88.2 %
153Eu (KED)	5.757 ppb	28 cps	73.3 %
158Gd (KED)	5.562 ppb	27 cps	94.4 %
159Tb (KED)	0.013 %	554 cps	140.1 %
164Dy (KED)	4.470 ppb	20 cps	86.6 %
166Er (KED)	2.809 ppb	13 cps	90.1 %
169Tm (KED)	4.812 ppb	62 cps	56.3 %
174Yb (KED)	5.468 ppb	29 cps	67.6 %
175Lu (KED)	2.981 ppb	39 cps	90.0 %
205Tl (KED)	16.291 ppb	206 cps	34.1 %
208Pb (KED)	39.125 ppb	357 cps	38.9 %
209Bi (KED)	0.010 %	387 cps	93.8 %
232Th (KED)	2.471 ppb	60 cps	70.9 %
238U (KED)	2.856 ppb	67 cps	48.2 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 10

Analysis name: 033915(179178)jian

Analysis started at: 9/30/2021 11:57:44 AM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	22.612 %	172.7 %
11B (KED)	Infinity ppb	
24Mg (KED)	Infinity ppb	
45Sc (KED)	22.817 %	173.1 %
51V (KED)	Infinity ppb	
52Cr (KED)	Infinity ppb	
55Mn (KED)	Infinity ppb	
56Fe (KED)	Infinity ppb	
58Ni (KED)	Infinity ppb	
63Cu (KED)	152.789 ppb	116.2 %
64Zn (KED)	869.190 ppb	97.5 %
69Ga (KED)	58.294 ppb	139.7 %
75As (KED)	480.297 ppb	156.1 %
80Se (KED)	154,903.831 ppb	145.2 %
85Rb (KED)	0.602 ppb	174.8 %
88Sr (KED)	29.184 ppb	76.7 %
89Y (KED)	21.904 %	173.2 %
107Ag (KED)	2.639 ppb	171.9 %
114Cd (KED)	6.734 ppb	100.5 %
115In (KED)	20.300 %	173.1 %
133Cs (KED)	7.799 ppb	137.1 %
138Ba (KED)	9.700 ppb	40.9 %
139La (KED)	5.134 ppb	95.7 %
140Ce (KED)	6.102 ppb	74.7 %
141Pr (KED)	7.450 ppb	131.1 %
142Nd (KED)	6.340 ppb	78.9 %
152Sm (KED)	1.639 ppb	167.2 %
153Eu (KED)	8.913 ppb	92.4 %
158Gd (KED)	4.031 ppb	84.3 %
159Tb (KED)	20.986 %	173.2 %
164Dy (KED)	8.525 ppb	123.6 %
166Er (KED)	10.293 ppb	132.5 %
169Tm (KED)	5.345 ppb	88.9 %
174Yb (KED)	3.824 ppb	94.1 %
175Lu (KED)	4.116 ppb	86.4 %
205Tl (KED)	11.480 ppb	98.0 %
208Pb (KED)	38.556 ppb	105.1 %
209Bi (KED)	20.377 %	173.2 %
232Th (KED)	2.386 ppb	122.4 %
238U (KED)	3.047 ppb	96.5 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	22.612 %	552 cps	172.7 %
9Be (KED)		2 cps	173.2 %
11B (KED)	Infinity ppb	79 cps	147.6 %
24Mg (KED)	Infinity ppb	55,061 cps	173.1 %
27Al (KED)		19,812 cps	173.1 %
45Sc (KED)	22.817 %	8,733 cps	173.1 %
51V (KED)	Infinity ppb	2,233 cps	172.6 %
52Cr (KED)	Infinity ppb	6,439 cps	172.7 %

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
55Mn (KED)	Infinity ppb	24,082 cps	173.1 %
56Fe (KED)	Infinity ppb	1,815,309 cps	173.2 %
58Ni (KED)	Infinity ppb	10,528 cps	172.7 %
59Co (KED)		1,579 cps	172.8 %
63Cu (KED)	152.789 ppb	24,139 cps	172.7 %
64Zn (KED)	869.190 ppb	118,936 cps	173.0 %
69Ga (KED)	58.294 ppb	1,856 cps	172.6 %
75As (KED)	480.297 ppb	164 cps	162.7 %
80Se (KED)	154,903.831 ppb	1,139 cps	6.8 %
85Rb (KED)	0.602 ppb	2,061 cps	173.2 %
88Sr (KED)	29.184 ppb	11,138 cps	173.1 %
89Y (KED)	21.904 %	85,317 cps	173.2 %
107Ag (KED)	2.639 ppb	453 cps	163.1 %
114Cd (KED)	6.734 ppb	190 cps	158.0 %
115In (KED)	20.300 %	154,145 cps	173.1 %
133Cs (KED)	7.799 ppb	892 cps	168.0 %
138Ba (KED)	9.700 ppb	52,160 cps	173.2 %
139La (KED)	5.134 ppb	10,791 cps	172.9 %
140Ce (KED)	6.102 ppb	29,677 cps	173.0 %
141Pr (KED)	7.450 ppb	3,891 cps	172.3 %
142Nd (KED)	6.340 ppb	7,933 cps	172.9 %
152Sm (KED)	1.639 ppb	1,067 cps	172.4 %
153Eu (KED)	8.913 ppb	536 cps	164.1 %
158Gd (KED)	4.031 ppb	1,357 cps	171.9 %
159Tb (KED)	20.986 %	893,572 cps	173.2 %
164Dy (KED)	8.525 ppb	1,196 cps	168.2 %
166Er (KED)	10.293 ppb	836 cps	169.1 %
169Tm (KED)	5.345 ppb	482 cps	153.0 %
174Yb (KED)	3.824 ppb	731 cps	170.0 %
175Lu (KED)	4.116 ppb	4,728 cps	172.1 %
205Tl (KED)	11.480 ppb	755 cps	136.5 %
208Pb (KED)	38.556 ppb	32,404 cps	171.3 %
209Bi (KED)	20.377 %	793,652 cps	173.2 %
232Th (KED)	2.386 ppb	15,431 cps	172.4 %
238U (KED)	3.047 ppb	4,539 cps	169.5 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 11

Analysis name: 046214(179142)jian

Analysis started at: 9/30/2021 12:01:28 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	0.819 %	159.0 %
11B (KED)	Infinity ppb	
24Mg (KED)	Infinity ppb	
27Al (KED)	Infinity ppb	
45Sc (KED)	2.825 %	172.1 %
52Cr (KED)	Infinity ppb	
55Mn (KED)	Infinity ppb	
56Fe (KED)	Infinity ppb	
58Ni (KED)	Infinity ppb	
59Co (KED)	Infinity ppb	
63Cu (KED)	18.306 ppb	56.1 %
64Zn (KED)	139.274 ppb	17.9 %
69Ga (KED)	4.747 ppb	70.4 %
75As (KED)	30.627 ppb	91.6 %
80Se (KED)	11,036.863 ppb	121.2 %
85Rb (KED)	6.076 ppb	43.0 %
88Sr (KED)	3.783 ppb	118.2 %
89Y (KED)	3.618 %	171.7 %
107Ag (KED)	4.750 ppb	125.7 %
114Cd (KED)	3.458 ppb	85.3 %
115In (KED)	3.153 %	171.8 %
133Cs (KED)	4.701 ppb	105.4 %
138Ba (KED)	11.235 ppb	59.2 %
139La (KED)	7.915 ppb	119.0 %
140Ce (KED)	6.394 ppb	86.0 %
141Pr (KED)	6.327 ppb	116.9 %
142Nd (KED)	8.630 ppb	99.9 %
152Sm (KED)	4.087 ppb	92.3 %
153Eu (KED)	5.480 ppb	105.0 %
158Gd (KED)	5.359 ppb	92.1 %
159Tb (KED)	3.379 %	172.0 %
164Dy (KED)	4.358 ppb	96.5 %
166Er (KED)	2.813 ppb	85.1 %
169Tm (KED)	3.825 ppb	90.2 %
174Yb (KED)	3.306 ppb	90.3 %
175Lu (KED)	2.595 ppb	95.0 %
205Tl (KED)	8.704 ppb	104.0 %
208Pb (KED)	21.917 ppb	117.1 %
209Bi (KED)	2.978 %	172.1 %
232Th (KED)	3.594 ppb	77.9 %
238U (KED)	3.256 ppb	85.0 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	0.819 %	20 cps	159.0 %
9Be (KED)		0 cps	
11B (KED)	Infinity ppb	13 cps	152.1 %
24Mg (KED)	Infinity ppb	7,263 cps	172.5 %
27Al (KED)	Infinity ppb	2,207 cps	171.9 %
45Sc (KED)	2.825 %	1,081 cps	172.1 %
51V (KED)		277 cps	171.1 %

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Category	Concentration average	Intensity average	Intensity RSD
52Cr (KED)	Infinity ppb	1,004 cps	168.6 %
55Mn (KED)	Infinity ppb	3,631 cps	172.0 %
56Fe (KED)	Infinity ppb	311,603 cps	172.6 %
58Ni (KED)	Infinity ppb	2,053 cps	170.3 %
59Co (KED)	Infinity ppb	300 cps	163.6 %
63Cu (KED)	18.306 ppb	5,476 cps	170.5 %
64Zn (KED)	139.274 ppb	20,571 cps	171.9 %
69Ga (KED)	4.747 ppb	352 cps	169.1 %
75As (KED)	30.627 ppb	32 cps	93.9 %
80Se (KED)	11,036.863 ppb	1,292 cps	6.8 %
85Rb (KED)	6.076 ppb	610 cps	169.9 %
88Sr (KED)	3.783 ppb	2,379 cps	172.8 %
89Y (KED)	3.618 %	14,091 cps	171.7 %
107Ag (KED)	4.750 ppb	317 cps	145.0 %
114Cd (KED)	3.458 ppb	54 cps	106.5 %
115In (KED)	3.153 %	23,943 cps	171.8 %
133Cs (KED)	4.701 ppb	204 cps	142.2 %
138Ba (KED)	11.235 ppb	10,933 cps	172.0 %
139La (KED)	7.915 ppb	2,430 cps	165.6 %
140Ce (KED)	6.394 ppb	6,152 cps	169.0 %
141Pr (KED)	6.327 ppb	876 cps	145.5 %
142Nd (KED)	8.630 ppb	1,748 cps	164.6 %
152Sm (KED)	4.087 ppb	242 cps	138.3 %
153Eu (KED)	5.480 ppb	202 cps	83.4 %
158Gd (KED)	5.359 ppb	330 cps	127.6 %
159Tb (KED)	3.379 %	143,856 cps	172.0 %
164Dy (KED)	4.358 ppb	279 cps	125.2 %
166Er (KED)	2.813 ppb	220 cps	110.1 %
169Tm (KED)	3.825 ppb	353 cps	72.3 %
174Yb (KED)	3.306 ppb	242 cps	107.5 %
175Lu (KED)	2.595 ppb	866 cps	135.1 %
205Tl (KED)	8.704 ppb	420 cps	53.0 %
208Pb (KED)	21.917 ppb	7,327 cps	162.0 %
209Bi (KED)	2.978 %	115,977 cps	172.1 %
232Th (KED)	3.594 ppb	3,411 cps	158.9 %
238U (KED)	3.256 ppb	1,116 cps	126.0 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 12

Analysis name: 179224jian

Analysis started at: 9/30/2021 12:09:14 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	134.445 %	1.8 %
9Be (KED)	0.022 ppb	1.8 %
11B (KED)	-15.189 ppb	1.5 %
24Mg (KED)	511.843 ppb	3.3 %
27Al (KED)	641.268 ppb	1.7 %
45Sc (KED)	125.745 %	1.3 %
51V (KED)	1.260 ppb	0.8 %
52Cr (KED)	2.586 ppb	2.4 %
55Mn (KED)	16.249 ppb	1.9 %
56Fe (KED)	699.005 ppb	1.5 %
58Ni (KED)	3.401 ppb	1.5 %
59Co (KED)	0.318 ppb	2.0 %
63Cu (KED)	6.993 ppb	2.4 %
64Zn (KED)	154.256 ppb	2.1 %
69Ga (KED)	1.540 ppb	1.2 %
75As (KED)	0.621 ppb	6.8 %
80Se (KED)	-0.162 ppb	145.8 %
85Rb (KED)	2.463 ppb	0.5 %
88Sr (KED)	6.385 ppb	1.1 %
89Y (KED)	109.970 %	2.0 %
107Ag (KED)	0.072 ppb	1.5 %
114Cd (KED)	0.044 ppb	3.2 %
115In (KED)	99.358 %	0.8 %
133Cs (KED)	0.140 ppb	7.2 %
138Ba (KED)	6.341 ppb	2.8 %
139La (KED)	0.627 ppb	1.9 %
140Ce (KED)	1.264 ppb	0.4 %
141Pr (KED)	0.148 ppb	2.0 %
142Nd (KED)	0.767 ppb	0.8 %
152Sm (KED)	0.107 ppb	6.3 %
153Eu (KED)	0.021 ppb	8.8 %
158Gd (KED)	0.089 ppb	2.1 %
159Tb (KED)	99.881 %	1.2 %
164Dy (KED)	0.064 ppb	1.7 %
166Er (KED)	0.032 ppb	4.0 %
169Tm (KED)	0.004 ppb	5.7 %
174Yb (KED)	0.026 ppb	5.0 %
175Lu (KED)	-0.008 ppb	9.8 %
205Tl (KED)	0.015 ppb	1.7 %
208Pb (KED)	0.951 ppb	2.5 %
209Bi (KED)	83.548 %	0.4 %
232Th (KED)	0.203 ppb	1.2 %
238U (KED)	0.050 ppb	0.5 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	134.445 %	3,284 cps	1.8 %
9Be (KED)	0.022 ppb	3 cps	0.0 %
11B (KED)	-15.189 ppb	801 cps	3.8 %
24Mg (KED)	511.843 ppb	301,350 cps	2.3 %
27Al (KED)	641.268 ppb	92,676 cps	0.6 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	125.745 %	48,128 cps	1.3 %
51V (KED)	1.260 ppb	10,261 cps	2.1 %
52Cr (KED)	2.586 ppb	33,187 cps	2.0 %
55Mn (KED)	16.249 ppb	109,942 cps	1.5 %
56Fe (KED)	699.005 ppb	8,186,096 cps	0.6 %
58Ni (KED)	3.401 ppb	49,897 cps	1.3 %
59Co (KED)	0.318 ppb	7,864 cps	0.8 %
63Cu (KED)	6.993 ppb	111,863 cps	0.9 %
64Zn (KED)	154.256 ppb	663,001 cps	0.4 %
69Ga (KED)	1.540 ppb	8,798 cps	3.0 %
75As (KED)	0.621 ppb	807 cps	5.3 %
80Se (KED)	-0.162 ppb	1,358 cps	7.2 %
85Rb (KED)	2.463 ppb	14,019 cps	2.0 %
88Sr (KED)	6.385 ppb	53,361 cps	0.9 %
89Y (KED)	109.970 %	428,328 cps	2.0 %
107Ag (KED)	0.072 ppb	3,455 cps	1.9 %
114Cd (KED)	0.044 ppb	839 cps	2.3 %
115In (KED)	99.358 %	754,458 cps	0.8 %
133Cs (KED)	0.140 ppb	4,014 cps	6.6 %
138Ba (KED)	6.341 ppb	253,583 cps	2.0 %
139La (KED)	0.627 ppb	50,684 cps	0.8 %
140Ce (KED)	1.264 ppb	136,048 cps	0.9 %
141Pr (KED)	0.148 ppb	17,027 cps	3.0 %
142Nd (KED)	0.767 ppb	35,578 cps	0.9 %
152Sm (KED)	0.107 ppb	4,679 cps	5.1 %
153Eu (KED)	0.021 ppb	1,838 cps	7.8 %
158Gd (KED)	0.089 ppb	5,281 cps	0.9 %
159Tb (KED)	99.881 %	4,252,891 cps	1.2 %
164Dy (KED)	0.064 ppb	4,439 cps	2.7 %
166Er (KED)	0.032 ppb	2,926 cps	4.3 %
169Tm (KED)	0.004 ppb	1,216 cps	4.6 %
174Yb (KED)	0.026 ppb	2,598 cps	4.3 %
175Lu (KED)	-0.008 ppb	19,358 cps	1.5 %
205Tl (KED)	0.015 ppb	2,580 cps	1.9 %
208Pb (KED)	0.951 ppb	145,282 cps	1.7 %
209Bi (KED)	83.548 %	3,254,116 cps	0.4 %
232Th (KED)	0.203 ppb	52,320 cps	1.4 %
238U (KED)	0.050 ppb	15,377 cps	0.7 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 13

Analysis name: 047600(178548)jian

Analysis started at: 9/30/2021 12:14:46 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	132.670 %	4.6 %
9Be (KED)	0.043 ppb	98.0 %
11B (KED)	-12.357 ppb	5.6 %
24Mg (KED)	627.087 ppb	4.2 %
27Al (KED)	914.142 ppb	2.0 %
45Sc (KED)	127.077 %	0.4 %
51V (KED)	1.542 ppb	1.4 %
52Cr (KED)	4.122 ppb	1.2 %
55Mn (KED)	20.188 ppb	0.6 %
56Fe (KED)	931.587 ppb	0.3 %
58Ni (KED)	4.661 ppb	1.3 %
59Co (KED)	0.379 ppb	2.6 %
63Cu (KED)	11.258 ppb	1.7 %
64Zn (KED)	155.947 ppb	1.3 %
69Ga (KED)	1.870 ppb	2.7 %
75As (KED)	0.546 ppb	1.8 %
80Se (KED)	-0.369 ppb	28.3 %
85Rb (KED)	2.189 ppb	3.5 %
88Sr (KED)	11.492 ppb	0.5 %
89Y (KED)	109.788 %	0.9 %
107Ag (KED)	0.033 ppb	1.9 %
114Cd (KED)	0.037 ppb	6.0 %
115In (KED)	100.356 %	1.4 %
133Cs (KED)	0.172 ppb	0.4 %
138Ba (KED)	7.220 ppb	1.1 %
139La (KED)	0.716 ppb	1.5 %
140Ce (KED)	1.502 ppb	2.0 %
141Pr (KED)	0.180 ppb	2.6 %
142Nd (KED)	0.962 ppb	1.9 %
152Sm (KED)	0.128 ppb	0.5 %
153Eu (KED)	0.026 ppb	3.0 %
158Gd (KED)	0.118 ppb	3.5 %
159Tb (KED)	101.772 %	0.8 %
164Dy (KED)	0.081 ppb	3.4 %
166Er (KED)	0.039 ppb	5.7 %
169Tm (KED)	0.005 ppb	3.6 %
174Yb (KED)	0.030 ppb	2.7 %
175Lu (KED)	-0.009 ppb	4.7 %
205Tl (KED)	0.015 ppb	0.4 %
208Pb (KED)	0.981 ppb	1.7 %
209Bi (KED)	82.716 %	0.4 %
232Th (KED)	0.288 ppb	2.7 %
238U (KED)	0.070 ppb	2.8 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	132.670 %	3,240 cps	4.6 %
9Be (KED)	0.043 ppb	7 cps	100.0 %
11B (KED)	-12.357 ppb	1,021 cps	2.7 %
24Mg (KED)	627.087 ppb	363,800 cps	0.7 %
27Al (KED)	914.142 ppb	133,444 cps	1.7 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	127.077 %	48,638 cps	0.4 %
51V (KED)	1.542 ppb	12,682 cps	1.7 %
52Cr (KED)	4.122 ppb	53,319 cps	1.3 %
55Mn (KED)	20.188 ppb	137,920 cps	1.0 %
56Fe (KED)	931.587 ppb	11,023,581 cps	0.1 %
58Ni (KED)	4.661 ppb	68,901 cps	1.7 %
59Co (KED)	0.379 ppb	9,477 cps	2.9 %
63Cu (KED)	11.258 ppb	179,307 cps	0.8 %
64Zn (KED)	155.947 ppb	669,296 cps	1.3 %
69Ga (KED)	1.870 ppb	10,638 cps	2.0 %
75As (KED)	0.546 ppb	711 cps	1.8 %
80Se (KED)	-0.369 ppb	1,277 cps	2.8 %
85Rb (KED)	2.189 ppb	12,437 cps	2.6 %
88Sr (KED)	11.492 ppb	95,686 cps	0.8 %
89Y (KED)	109.788 %	427,621 cps	0.9 %
107Ag (KED)	0.033 ppb	1,688 cps	1.1 %
114Cd (KED)	0.037 ppb	716 cps	6.7 %
115In (KED)	100.356 %	762,034 cps	1.4 %
133Cs (KED)	0.172 ppb	4,975 cps	1.2 %
138Ba (KED)	7.220 ppb	293,934 cps	1.0 %
139La (KED)	0.716 ppb	58,981 cps	1.3 %
140Ce (KED)	1.502 ppb	164,641 cps	1.3 %
141Pr (KED)	0.180 ppb	21,137 cps	1.9 %
142Nd (KED)	0.962 ppb	45,430 cps	1.6 %
152Sm (KED)	0.128 ppb	5,724 cps	0.8 %
153Eu (KED)	0.026 ppb	2,375 cps	2.8 %
158Gd (KED)	0.118 ppb	7,061 cps	2.7 %
159Tb (KED)	101.772 %	4,333,412 cps	0.8 %
164Dy (KED)	0.081 ppb	5,722 cps	3.7 %
166Er (KED)	0.039 ppb	3,579 cps	5.9 %
169Tm (KED)	0.005 ppb	1,505 cps	3.8 %
174Yb (KED)	0.030 ppb	3,055 cps	3.3 %
175Lu (KED)	-0.009 ppb	19,435 cps	0.5 %
205Tl (KED)	0.015 ppb	2,455 cps	0.2 %
208Pb (KED)	0.981 ppb	147,282 cps	1.1 %
209Bi (KED)	82.716 %	3,221,683 cps	0.4 %
232Th (KED)	0.288 ppb	72,435 cps	2.5 %
238U (KED)	0.070 ppb	20,619 cps	2.6 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 14

Analysis name: 179410jian

Analysis started at: 9/30/2021 12:19:07 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	130.668 %	2.8 %
9Be (KED)	0.037 ppb	123.0 %
11B (KED)	-17.325 ppb	3.9 %
24Mg (KED)	973.120 ppb	3.1 %
27Al (KED)	1,241.841 ppb	3.2 %
45Sc (KED)	129.768 %	0.4 %
51V (KED)	2.197 ppb	1.6 %
52Cr (KED)	3.545 ppb	2.2 %
55Mn (KED)	28.338 ppb	0.7 %
56Fe (KED)	1,336.015 ppb	1.0 %
58Ni (KED)	6.492 ppb	1.6 %
59Co (KED)	0.569 ppb	2.1 %
63Cu (KED)	9.043 ppb	1.1 %
64Zn (KED)	150.213 ppb	0.2 %
69Ga (KED)	2.529 ppb	1.8 %
75As (KED)	0.728 ppb	3.6 %
80Se (KED)	-0.279 ppb	39.5 %
85Rb (KED)	4.224 ppb	1.3 %
88Sr (KED)	13.289 ppb	1.2 %
89Y (KED)	112.040 %	0.6 %
107Ag (KED)	0.051 ppb	3.5 %
114Cd (KED)	0.074 ppb	9.3 %
115In (KED)	98.115 %	1.4 %
133Cs (KED)	0.261 ppb	1.1 %
138Ba (KED)	10.176 ppb	2.3 %
139La (KED)	1.161 ppb	3.0 %
140Ce (KED)	2.449 ppb	3.4 %
141Pr (KED)	0.274 ppb	3.3 %
142Nd (KED)	1.506 ppb	2.3 %
152Sm (KED)	0.210 ppb	3.9 %
153Eu (KED)	0.040 ppb	4.6 %
158Gd (KED)	0.178 ppb	4.6 %
159Tb (KED)	96.266 %	1.6 %
164Dy (KED)	0.124 ppb	5.0 %
166Er (KED)	0.063 ppb	2.2 %
169Tm (KED)	0.008 ppb	7.3 %
174Yb (KED)	0.046 ppb	5.6 %
175Lu (KED)	-0.004 ppb	115.4 %
205Tl (KED)	0.020 ppb	4.7 %
208Pb (KED)	1.613 ppb	2.5 %
209Bi (KED)	80.376 %	1.5 %
232Th (KED)	0.432 ppb	2.3 %
238U (KED)	0.101 ppb	2.1 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	130.668 %	3,192 cps	2.8 %
9Be (KED)	0.037 ppb	6 cps	124.9 %
11B (KED)	-17.325 ppb	607 cps	11.4 %
24Mg (KED)	973.120 ppb	555,985 cps	0.6 %
27Al (KED)	1,241.841 ppb	185,048 cps	3.0 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	129.768 %	49,668 cps	0.4 %
51V (KED)	2.197 ppb	18,440 cps	1.3 %
52Cr (KED)	3.545 ppb	46,866 cps	1.8 %
55Mn (KED)	28.338 ppb	197,446 cps	0.3 %
56Fe (KED)	1,336.015 ppb	16,139,637 cps	0.8 %
58Ni (KED)	6.492 ppb	97,767 cps	1.2 %
59Co (KED)	0.569 ppb	14,492 cps	2.5 %
63Cu (KED)	9.043 ppb	147,168 cps	1.4 %
64Zn (KED)	150.213 ppb	658,004 cps	0.4 %
69Ga (KED)	2.529 ppb	14,652 cps	1.2 %
75As (KED)	0.728 ppb	962 cps	4.0 %
80Se (KED)	-0.279 ppb	1,338 cps	3.6 %
85Rb (KED)	4.224 ppb	24,467 cps	1.3 %
88Sr (KED)	13.289 ppb	112,873 cps	0.7 %
89Y (KED)	112.040 %	436,393 cps	0.6 %
107Ag (KED)	0.051 ppb	2,455 cps	2.6 %
114Cd (KED)	0.074 ppb	1,337 cps	8.2 %
115In (KED)	98.115 %	745,016 cps	1.4 %
133Cs (KED)	0.261 ppb	7,357 cps	1.3 %
138Ba (KED)	10.176 ppb	390,872 cps	1.0 %
139La (KED)	1.161 ppb	90,290 cps	2.1 %
140Ce (KED)	2.449 ppb	253,600 cps	1.9 %
141Pr (KED)	0.274 ppb	30,318 cps	2.0 %
142Nd (KED)	1.506 ppb	67,236 cps	1.3 %
152Sm (KED)	0.210 ppb	8,855 cps	2.6 %
153Eu (KED)	0.040 ppb	3,407 cps	3.3 %
158Gd (KED)	0.178 ppb	10,097 cps	3.2 %
159Tb (KED)	96.266 %	4,098,977 cps	1.6 %
164Dy (KED)	0.124 ppb	8,258 cps	3.4 %
166Er (KED)	0.063 ppb	5,289 cps	2.3 %
169Tm (KED)	0.008 ppb	2,144 cps	5.4 %
174Yb (KED)	0.046 ppb	4,472 cps	4.8 %
175Lu (KED)	-0.004 ppb	19,228 cps	2.8 %
205Tl (KED)	0.020 ppb	3,276 cps	6.1 %
208Pb (KED)	1.613 ppb	213,519 cps	1.2 %
209Bi (KED)	80.376 %	3,130,536 cps	1.5 %
232Th (KED)	0.432 ppb	104,243 cps	2.0 %
238U (KED)	0.101 ppb	28,567 cps	3.4 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 15

Analysis name: 047668(178626)jian

Analysis started at: 9/30/2021 12:23:24 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	130.941 %	2.1 %
9Be (KED)	0.038 ppb	91.9 %
11B (KED)	-13.675 ppb	2.6 %
24Mg (KED)	1,369.879 ppb	2.4 %
27Al (KED)	1,635.027 ppb	1.6 %
45Sc (KED)	130.668 %	1.6 %
51V (KED)	3.019 ppb	1.9 %
52Cr (KED)	4.929 ppb	1.4 %
55Mn (KED)	41.469 ppb	2.3 %
56Fe (KED)	1,889.640 ppb	1.4 %
58Ni (KED)	8.623 ppb	2.0 %
59Co (KED)	0.815 ppb	2.1 %
63Cu (KED)	13.741 ppb	1.3 %
64Zn (KED)	146.551 ppb	1.2 %
69Ga (KED)	3.428 ppb	2.3 %
75As (KED)	1.012 ppb	8.1 %
80Se (KED)	-0.086 ppb	215.3 %
85Rb (KED)	4.229 ppb	1.6 %
88Sr (KED)	19.240 ppb	2.3 %
89Y (KED)	113.518 %	1.0 %
107Ag (KED)	0.100 ppb	2.3 %
114Cd (KED)	0.066 ppb	1.1 %
115In (KED)	98.152 %	1.5 %
133Cs (KED)	0.340 ppb	5.2 %
138Ba (KED)	13.620 ppb	1.3 %
139La (KED)	1.758 ppb	1.0 %
140Ce (KED)	3.554 ppb	0.9 %
141Pr (KED)	0.418 ppb	0.5 %
142Nd (KED)	2.188 ppb	3.3 %
152Sm (KED)	0.305 ppb	1.0 %
153Eu (KED)	0.058 ppb	4.5 %
158Gd (KED)	0.266 ppb	2.6 %
159Tb (KED)	95.789 %	0.8 %
164Dy (KED)	0.179 ppb	1.8 %
166Er (KED)	0.086 ppb	1.1 %
169Tm (KED)	0.011 ppb	4.4 %
174Yb (KED)	0.065 ppb	2.5 %
175Lu (KED)	-0.003 ppb	52.6 %
205Tl (KED)	0.024 ppb	1.9 %
208Pb (KED)	1.904 ppb	2.9 %
209Bi (KED)	78.409 %	0.3 %
232Th (KED)	0.640 ppb	1.2 %
238U (KED)	0.139 ppb	2.1 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	130.941 %	3,198 cps	2.1 %
9Be (KED)	0.038 ppb	6 cps	91.7 %
11B (KED)	-13.675 ppb	902 cps	1.2 %
24Mg (KED)	1,369.879 ppb	784,183 cps	0.3 %
27Al (KED)	1,635.027 ppb	245,248 cps	1.2 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	130.668 %	50,012 cps	1.6 %
51V (KED)	3.019 ppb	25,494 cps	0.4 %
52Cr (KED)	4.929 ppb	65,515 cps	1.7 %
55Mn (KED)	41.469 ppb	290,605 cps	0.9 %
56Fe (KED)	1,889.640 ppb	22,978,960 cps	0.1 %
58Ni (KED)	8.623 ppb	130,560 cps	0.6 %
59Co (KED)	0.815 ppb	20,836 cps	1.3 %
63Cu (KED)	13.741 ppb	226,095 cps	1.1 %
64Zn (KED)	146.551 ppb	650,441 cps	0.7 %
69Ga (KED)	3.428 ppb	20,087 cps	2.2 %
75As (KED)	1.012 ppb	1,348 cps	8.5 %
80Se (KED)	-0.086 ppb	1,431 cps	4.1 %
85Rb (KED)	4.229 ppb	24,815 cps	0.6 %
88Sr (KED)	19.240 ppb	165,451 cps	2.2 %
89Y (KED)	113.518 %	442,149 cps	1.0 %
107Ag (KED)	0.100 ppb	4,684 cps	0.8 %
114Cd (KED)	0.066 ppb	1,211 cps	2.0 %
115In (KED)	98.152 %	745,299 cps	1.5 %
133Cs (KED)	0.340 ppb	9,574 cps	5.2 %
138Ba (KED)	13.620 ppb	519,903 cps	1.3 %
139La (KED)	1.758 ppb	136,039 cps	1.4 %
140Ce (KED)	3.554 ppb	366,063 cps	0.1 %
141Pr (KED)	0.418 ppb	45,985 cps	0.5 %
142Nd (KED)	2.188 ppb	97,130 cps	2.5 %
152Sm (KED)	0.305 ppb	12,778 cps	0.4 %
153Eu (KED)	0.058 ppb	4,882 cps	3.8 %
158Gd (KED)	0.266 ppb	14,987 cps	3.2 %
159Tb (KED)	95.789 %	4,078,633 cps	0.8 %
164Dy (KED)	0.179 ppb	11,794 cps	2.6 %
166Er (KED)	0.086 ppb	7,119 cps	1.7 %
169Tm (KED)	0.011 ppb	3,014 cps	4.2 %
174Yb (KED)	0.065 ppb	6,189 cps	2.1 %
175Lu (KED)	-0.003 ppb	19,372 cps	1.5 %
205Tl (KED)	0.024 ppb	3,872 cps	2.1 %
208Pb (KED)	1.904 ppb	239,977 cps	2.7 %
209Bi (KED)	78.409 %	3,053,954 cps	0.3 %
232Th (KED)	0.640 ppb	149,668 cps	0.9 %
238U (KED)	0.139 ppb	37,855 cps	2.1 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 16

Analysis name: 026367(179413)jian

Analysis started at: 9/30/2021 12:27:47 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	128.711 %	2.8 %
9Be (KED)	0.077 ppb	17.9 %
11B (KED)	-16.291 ppb	7.4 %
24Mg (KED)	785.273 ppb	2.6 %
27Al (KED)	767.984 ppb	1.1 %
45Sc (KED)	131.668 %	1.6 %
51V (KED)	1.362 ppb	1.2 %
52Cr (KED)	3.161 ppb	0.6 %
55Mn (KED)	22.006 ppb	1.8 %
56Fe (KED)	981.246 ppb	2.5 %
58Ni (KED)	5.227 ppb	3.3 %
59Co (KED)	0.398 ppb	3.8 %
63Cu (KED)	13.904 ppb	1.9 %
64Zn (KED)	152.296 ppb	0.9 %
69Ga (KED)	1.781 ppb	2.3 %
75As (KED)	0.528 ppb	6.7 %
80Se (KED)	-0.238 ppb	47.4 %
85Rb (KED)	2.956 ppb	4.1 %
88Sr (KED)	11.224 ppb	2.7 %
89Y (KED)	112.199 %	0.8 %
107Ag (KED)	0.074 ppb	7.0 %
114Cd (KED)	0.053 ppb	6.4 %
115In (KED)	99.745 %	1.1 %
133Cs (KED)	0.157 ppb	5.5 %
138Ba (KED)	7.199 ppb	3.6 %
139La (KED)	0.693 ppb	1.7 %
140Ce (KED)	1.460 ppb	2.0 %
141Pr (KED)	0.165 ppb	3.0 %
142Nd (KED)	0.872 ppb	4.0 %
152Sm (KED)	0.124 ppb	2.9 %
153Eu (KED)	0.024 ppb	6.4 %
158Gd (KED)	0.105 ppb	1.6 %
159Tb (KED)	96.906 %	2.1 %
164Dy (KED)	0.072 ppb	4.6 %
166Er (KED)	0.036 ppb	5.3 %
169Tm (KED)	0.004 ppb	4.4 %
174Yb (KED)	0.027 ppb	6.2 %
175Lu (KED)	-0.010 ppb	38.7 %
205Tl (KED)	0.016 ppb	1.3 %
208Pb (KED)	1.143 ppb	2.2 %
209Bi (KED)	80.960 %	0.3 %
232Th (KED)	0.247 ppb	0.9 %
238U (KED)	0.068 ppb	1.3 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	128.711 %	3,144 cps	2.8 %
9Be (KED)	0.077 ppb	11 cps	17.3 %
11B (KED)	-16.291 ppb	678 cps	12.1 %
24Mg (KED)	785.273 ppb	442,140 cps	0.9 %
27Al (KED)	767.984 ppb	116,182 cps	0.6 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	131.668 %	50,395 cps	1.6 %
51V (KED)	1.362 ppb	11,608 cps	0.7 %
52Cr (KED)	3.161 ppb	42,423 cps	1.3 %
55Mn (KED)	22.006 ppb	155,683 cps	0.2 %
56Fe (KED)	981.246 ppb	12,027,138 cps	1.0 %
58Ni (KED)	5.227 ppb	79,970 cps	2.6 %
59Co (KED)	0.398 ppb	10,290 cps	2.2 %
63Cu (KED)	13.904 ppb	226,095 cps	1.1 %
64Zn (KED)	152.296 ppb	668,022 cps	0.4 %
69Ga (KED)	1.781 ppb	10,360 cps	1.6 %
75As (KED)	0.528 ppb	703 cps	5.7 %
80Se (KED)	-0.238 ppb	1,356 cps	2.5 %
85Rb (KED)	2.956 ppb	17,154 cps	3.3 %
88Sr (KED)	11.224 ppb	95,503 cps	2.1 %
89Y (KED)	112.199 %	437,011 cps	0.8 %
107Ag (KED)	0.074 ppb	3,546 cps	5.8 %
114Cd (KED)	0.053 ppb	997 cps	6.2 %
115In (KED)	99.745 %	757,394 cps	1.1 %
133Cs (KED)	0.157 ppb	4,529 cps	4.5 %
138Ba (KED)	7.199 ppb	278,948 cps	1.5 %
139La (KED)	0.693 ppb	54,363 cps	0.4 %
140Ce (KED)	1.460 ppb	152,384 cps	1.2 %
141Pr (KED)	0.165 ppb	18,467 cps	1.3 %
142Nd (KED)	0.872 ppb	39,210 cps	2.1 %
152Sm (KED)	0.124 ppb	5,253 cps	0.8 %
153Eu (KED)	0.024 ppb	2,049 cps	7.0 %
158Gd (KED)	0.105 ppb	5,986 cps	3.4 %
159Tb (KED)	96.906 %	4,126,227 cps	2.1 %
164Dy (KED)	0.072 ppb	4,814 cps	3.2 %
166Er (KED)	0.036 ppb	3,178 cps	4.1 %
169Tm (KED)	0.004 ppb	1,279 cps	2.0 %
174Yb (KED)	0.027 ppb	2,633 cps	4.0 %
175Lu (KED)	-0.010 ppb	18,453 cps	1.2 %
205Tl (KED)	0.016 ppb	2,574 cps	1.5 %
208Pb (KED)	1.143 ppb	162,311 cps	1.5 %
209Bi (KED)	80.960 %	3,153,287 cps	0.3 %
232Th (KED)	0.247 ppb	61,022 cps	1.2 %
238U (KED)	0.068 ppb	19,710 cps	1.0 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 17

Analysis name: 028529(178579)jian

Analysis started at: 9/30/2021 12:32:59 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	136.720 %	7.6 %
9Be (KED)	0.056 ppb	87.0 %
11B (KED)	-10.635 ppb	26.0 %
24Mg (KED)	1,295.595 ppb	6.1 %
27Al (KED)	1,812.649 ppb	1.4 %
45Sc (KED)	131.120 %	1.5 %
51V (KED)	3.153 ppb	2.0 %
52Cr (KED)	4.599 ppb	1.9 %
55Mn (KED)	42.681 ppb	1.0 %
56Fe (KED)	1,944.798 ppb	2.9 %
58Ni (KED)	8.496 ppb	2.0 %
59Co (KED)	0.835 ppb	2.2 %
63Cu (KED)	10.641 ppb	1.0 %
64Zn (KED)	142.207 ppb	1.1 %
69Ga (KED)	3.428 ppb	1.0 %
75As (KED)	1.052 ppb	4.5 %
80Se (KED)	0.279 ppb	58.5 %
85Rb (KED)	4.239 ppb	1.1 %
88Sr (KED)	20.673 ppb	1.8 %
89Y (KED)	115.939 %	0.6 %
107Ag (KED)	0.106 ppb	2.9 %
114Cd (KED)	0.079 ppb	2.4 %
115In (KED)	98.170 %	0.8 %
133Cs (KED)	0.356 ppb	0.7 %
138Ba (KED)	13.475 ppb	2.9 %
139La (KED)	1.690 ppb	2.0 %
140Ce (KED)	3.573 ppb	3.7 %
141Pr (KED)	0.416 ppb	1.4 %
142Nd (KED)	2.187 ppb	3.3 %
152Sm (KED)	0.304 ppb	0.7 %
153Eu (KED)	0.058 ppb	3.3 %
158Gd (KED)	0.263 ppb	2.0 %
159Tb (KED)	94.565 %	1.3 %
164Dy (KED)	0.181 ppb	1.2 %
166Er (KED)	0.085 ppb	3.0 %
169Tm (KED)	0.011 ppb	5.3 %
174Yb (KED)	0.067 ppb	5.9 %
175Lu (KED)	-0.001 ppb	32.7 %
205Tl (KED)	0.023 ppb	7.7 %
208Pb (KED)	1.961 ppb	3.0 %
209Bi (KED)	78.387 %	1.3 %
232Th (KED)	0.647 ppb	1.2 %
238U (KED)	0.142 ppb	2.1 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	136.720 %	3,339 cps	7.6 %
9Be (KED)	0.056 ppb	9 cps	86.6 %
11B (KED)	-10.635 ppb	1,189 cps	13.1 %
24Mg (KED)	1,295.595 ppb	772,312 cps	1.3 %
27Al (KED)	1,812.649 ppb	272,824 cps	1.6 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	131.120 %	50,185 cps	1.5 %
51V (KED)	3.153 ppb	26,726 cps	2.7 %
52Cr (KED)	4.599 ppb	61,350 cps	0.9 %
55Mn (KED)	42.681 ppb	300,163 cps	0.9 %
56Fe (KED)	1,944.798 ppb	23,727,968 cps	1.4 %
58Ni (KED)	8.496 ppb	129,083 cps	0.6 %
59Co (KED)	0.835 ppb	21,433 cps	1.6 %
63Cu (KED)	10.641 ppb	179,022 cps	0.4 %
64Zn (KED)	142.207 ppb	644,703 cps	0.6 %
69Ga (KED)	3.428 ppb	20,515 cps	0.9 %
75As (KED)	1.052 ppb	1,430 cps	4.0 %
80Se (KED)	0.279 ppb	1,609 cps	3.6 %
85Rb (KED)	4.239 ppb	25,409 cps	0.6 %
88Sr (KED)	20.673 ppb	181,558 cps	2.2 %
89Y (KED)	115.939 %	451,576 cps	0.6 %
107Ag (KED)	0.106 ppb	4,972 cps	2.7 %
114Cd (KED)	0.079 ppb	1,425 cps	1.6 %
115In (KED)	98.170 %	745,434 cps	0.8 %
133Cs (KED)	0.356 ppb	10,002 cps	1.0 %
138Ba (KED)	13.475 ppb	507,699 cps	1.6 %
139La (KED)	1.690 ppb	129,092 cps	1.5 %
140Ce (KED)	3.573 ppb	363,245 cps	2.4 %
141Pr (KED)	0.416 ppb	45,263 cps	1.3 %
142Nd (KED)	2.187 ppb	95,858 cps	2.6 %
152Sm (KED)	0.304 ppb	12,584 cps	1.5 %
153Eu (KED)	0.058 ppb	4,833 cps	2.8 %
158Gd (KED)	0.263 ppb	14,614 cps	0.8 %
159Tb (KED)	94.565 %	4,026,518 cps	1.3 %
164Dy (KED)	0.181 ppb	11,774 cps	1.8 %
166Er (KED)	0.085 ppb	6,904 cps	3.1 %
169Tm (KED)	0.011 ppb	2,976 cps	4.1 %
174Yb (KED)	0.067 ppb	6,344 cps	6.3 %
175Lu (KED)	-0.001 ppb	19,373 cps	1.5 %
205Tl (KED)	0.023 ppb	3,678 cps	7.5 %
208Pb (KED)	1.961 ppb	245,963 cps	2.2 %
209Bi (KED)	78.387 %	3,053,092 cps	1.3 %
232Th (KED)	0.647 ppb	151,146 cps	0.6 %
238U (KED)	0.142 ppb	38,663 cps	2.2 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 18

Analysis name: 047678(178591)jian

Analysis started at: 9/30/2021 12:37:34 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	138.813 %	2.3 %
9Be (KED)	0.071 ppb	43.6 %
11B (KED)	-14.780 ppb	0.9 %
24Mg (KED)	1,577.318 ppb	1.2 %
27Al (KED)	2,139.431 ppb	3.0 %
45Sc (KED)	139.011 %	1.7 %
51V (KED)	3.811 ppb	2.5 %
52Cr (KED)	4.497 ppb	1.3 %
55Mn (KED)	47.533 ppb	2.7 %
56Fe (KED)	2,264.628 ppb	0.7 %
58Ni (KED)	9.578 ppb	1.6 %
59Co (KED)	0.907 ppb	1.0 %
63Cu (KED)	11.675 ppb	1.3 %
64Zn (KED)	141.972 ppb	0.4 %
69Ga (KED)	4.171 ppb	3.6 %
75As (KED)	1.133 ppb	3.5 %
80Se (KED)	-0.226 ppb	45.6 %
85Rb (KED)	5.590 ppb	1.7 %
88Sr (KED)	22.901 ppb	1.3 %
89Y (KED)	115.444 %	1.2 %
107Ag (KED)	0.058 ppb	3.4 %
114Cd (KED)	0.056 ppb	3.8 %
115In (KED)	97.267 %	0.6 %
133Cs (KED)	0.445 ppb	4.1 %
138Ba (KED)	15.942 ppb	1.0 %
139La (KED)	2.120 ppb	0.4 %
140Ce (KED)	4.388 ppb	0.8 %
141Pr (KED)	0.504 ppb	1.3 %
142Nd (KED)	2.696 ppb	1.9 %
152Sm (KED)	0.366 ppb	1.7 %
153Eu (KED)	0.073 ppb	3.0 %
158Gd (KED)	0.322 ppb	1.5 %
159Tb (KED)	94.320 %	1.4 %
164Dy (KED)	0.223 ppb	3.1 %
166Er (KED)	0.111 ppb	0.7 %
169Tm (KED)	0.015 ppb	3.8 %
174Yb (KED)	0.084 ppb	2.9 %
175Lu (KED)	-0.001 ppb	434.8 %
205Tl (KED)	0.031 ppb	2.5 %
208Pb (KED)	2.018 ppb	2.2 %
209Bi (KED)	76.501 %	2.8 %
232Th (KED)	0.840 ppb	1.7 %
238U (KED)	0.170 ppb	3.3 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	138.813 %	3,390 cps	2.3 %
9Be (KED)	0.071 ppb	11 cps	45.8 %
11B (KED)	-14.780 ppb	862 cps	3.5 %
24Mg (KED)	1,577.318 ppb	957,301 cps	1.8 %
27Al (KED)	2,139.431 ppb	341,262 cps	1.5 %

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	139.011 %	53,205 cps	1.7 %
51V (KED)	3.811 ppb	34,232 cps	1.4 %
52Cr (KED)	4.497 ppb	63,607 cps	1.3 %
55Mn (KED)	47.533 ppb	354,252 cps	1.2 %
56Fe (KED)	2,264.628 ppb	29,298,554 cps	1.5 %
58Ni (KED)	9.578 ppb	154,216 cps	1.1 %
59Co (KED)	0.907 ppb	24,684 cps	2.0 %
63Cu (KED)	11.675 ppb	195,495 cps	0.5 %
64Zn (KED)	141.972 ppb	640,928 cps	1.4 %
69Ga (KED)	4.171 ppb	24,830 cps	2.7 %
75As (KED)	1.133 ppb	1,533 cps	3.6 %
80Se (KED)	-0.226 ppb	1,400 cps	3.9 %
85Rb (KED)	5.590 ppb	33,355 cps	2.0 %
88Sr (KED)	22.901 ppb	200,214 cps	0.4 %
89Y (KED)	115.444 %	449,650 cps	1.2 %
107Ag (KED)	0.058 ppb	2,765 cps	2.7 %
114Cd (KED)	0.056 ppb	1,022 cps	4.1 %
115In (KED)	97.267 %	738,581 cps	0.6 %
133Cs (KED)	0.445 ppb	12,383 cps	3.5 %
138Ba (KED)	15.942 ppb	598,800 cps	0.8 %
139La (KED)	2.120 ppb	161,540 cps	1.2 %
140Ce (KED)	4.388 ppb	445,005 cps	1.5 %
141Pr (KED)	0.504 ppb	54,600 cps	1.6 %
142Nd (KED)	2.696 ppb	117,843 cps	0.5 %
152Sm (KED)	0.366 ppb	15,090 cps	0.7 %
153Eu (KED)	0.073 ppb	6,083 cps	4.0 %
158Gd (KED)	0.322 ppb	17,879 cps	1.3 %
159Tb (KED)	94.320 %	4,016,098 cps	1.4 %
164Dy (KED)	0.223 ppb	14,478 cps	1.9 %
166Er (KED)	0.111 ppb	8,940 cps	1.9 %
169Tm (KED)	0.015 ppb	3,851 cps	5.0 %
174Yb (KED)	0.084 ppb	7,898 cps	1.6 %
175Lu (KED)	-0.001 ppb	19,351 cps	3.1 %
205Tl (KED)	0.031 ppb	4,735 cps	2.1 %
208Pb (KED)	2.018 ppb	246,076 cps	2.1 %
209Bi (KED)	76.501 %	2,979,644 cps	2.8 %
232Th (KED)	0.840 ppb	190,832 cps	1.1 %
238U (KED)	0.170 ppb	44,970 cps	2.7 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 19

Analysis name: 029245(179423)jian

Analysis started at: 9/30/2021 12:41:41 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	136.038 %	2.9 %
9Be (KED)	0.021 ppb	99.6 %
11B (KED)	-14.832 ppb	6.4 %
24Mg (KED)	1,098.968 ppb	5.3 %
27Al (KED)	1,414.195 ppb	2.1 %
45Sc (KED)	136.029 %	0.3 %
51V (KED)	2.602 ppb	2.4 %
52Cr (KED)	3.423 ppb	3.3 %
55Mn (KED)	31.523 ppb	1.3 %
56Fe (KED)	1,554.019 ppb	1.2 %
58Ni (KED)	6.719 ppb	1.6 %
59Co (KED)	0.646 ppb	2.6 %
63Cu (KED)	10.507 ppb	3.0 %
64Zn (KED)	141.141 ppb	3.1 %
69Ga (KED)	2.989 ppb	3.4 %
75As (KED)	0.846 ppb	3.7 %
80Se (KED)	0.041 ppb	430.9 %
85Rb (KED)	4.798 ppb	2.8 %
88Sr (KED)	14.823 ppb	0.7 %
89Y (KED)	112.784 %	1.9 %
107Ag (KED)	0.042 ppb	8.5 %
114Cd (KED)	0.047 ppb	5.2 %
115In (KED)	97.414 %	1.2 %
133Cs (KED)	0.289 ppb	2.9 %
138Ba (KED)	11.223 ppb	2.0 %
139La (KED)	1.463 ppb	1.4 %
140Ce (KED)	2.962 ppb	0.9 %
141Pr (KED)	0.344 ppb	1.0 %
142Nd (KED)	1.829 ppb	0.4 %
152Sm (KED)	0.252 ppb	4.0 %
153Eu (KED)	0.045 ppb	2.1 %
158Gd (KED)	0.218 ppb	2.2 %
159Tb (KED)	93.444 %	1.0 %
164Dy (KED)	0.146 ppb	3.7 %
166Er (KED)	0.071 ppb	4.0 %
169Tm (KED)	0.009 ppb	4.4 %
174Yb (KED)	0.054 ppb	1.3 %
175Lu (KED)	-0.005 ppb	28.9 %
205Tl (KED)	0.020 ppb	0.7 %
208Pb (KED)	1.544 ppb	2.7 %
209Bi (KED)	75.810 %	0.8 %
232Th (KED)	0.525 ppb	0.8 %
238U (KED)	0.112 ppb	2.8 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	136.038 %	3,323 cps	2.9 %
9Be (KED)	0.021 ppb	3 cps	100.0 %
11B (KED)	-14.832 ppb	840 cps	9.0 %
24Mg (KED)	1,098.968 ppb	653,306 cps	2.3 %
27Al (KED)	1,414.195 ppb	220,887 cps	2.4 %

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	136.029 %	52,064 cps	0.3 %
51V (KED)	2.602 ppb	22,881 cps	2.5 %
52Cr (KED)	3.423 ppb	47,440 cps	3.0 %
55Mn (KED)	31.523 ppb	230,170 cps	1.0 %
56Fe (KED)	1,554.019 ppb	19,677,530 cps	1.2 %
58Ni (KED)	6.719 ppb	106,045 cps	1.4 %
59Co (KED)	0.646 ppb	17,229 cps	2.3 %
63Cu (KED)	10.507 ppb	171,919 cps	1.1 %
64Zn (KED)	141.141 ppb	622,252 cps	1.3 %
69Ga (KED)	2.989 ppb	17,411 cps	2.5 %
75As (KED)	0.846 ppb	1,123 cps	5.4 %
80Se (KED)	0.041 ppb	1,471 cps	3.2 %
85Rb (KED)	4.798 ppb	27,964 cps	0.9 %
88Sr (KED)	14.823 ppb	126,714 cps	2.2 %
89Y (KED)	112.784 %	439,288 cps	1.9 %
107Ag (KED)	0.042 ppb	2,026 cps	7.3 %
114Cd (KED)	0.047 ppb	874 cps	5.0 %
115In (KED)	97.414 %	739,697 cps	1.2 %
133Cs (KED)	0.289 ppb	8,083 cps	3.4 %
138Ba (KED)	11.223 ppb	418,315 cps	2.1 %
139La (KED)	1.463 ppb	110,491 cps	0.5 %
140Ce (KED)	2.962 ppb	297,751 cps	0.6 %
141Pr (KED)	0.344 ppb	36,929 cps	0.1 %
142Nd (KED)	1.829 ppb	79,251 cps	1.3 %
152Sm (KED)	0.252 ppb	10,311 cps	3.6 %
153Eu (KED)	0.045 ppb	3,718 cps	2.6 %
158Gd (KED)	0.218 ppb	11,988 cps	1.3 %
159Tb (KED)	93.444 %	3,978,785 cps	1.0 %
164Dy (KED)	0.146 ppb	9,422 cps	2.9 %
166Er (KED)	0.071 ppb	5,749 cps	3.1 %
169Tm (KED)	0.009 ppb	2,402 cps	4.7 %
174Yb (KED)	0.054 ppb	5,080 cps	2.3 %
175Lu (KED)	-0.005 ppb	18,517 cps	2.2 %
205Tl (KED)	0.020 ppb	3,107 cps	0.5 %
208Pb (KED)	1.544 ppb	194,116 cps	1.4 %
209Bi (KED)	75.810 %	2,952,696 cps	0.8 %
232Th (KED)	0.525 ppb	119,014 cps	0.6 %
238U (KED)	0.112 ppb	29,605 cps	1.9 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 20

Analysis name: 178562jian

Analysis started at: 9/30/2021 12:46:34 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	130.759 %	3.8 %
9Be (KED)	0.031 ppb	116.9 %
11B (KED)	-17.545 ppb	0.8 %
24Mg (KED)	697.473 ppb	4.2 %
27Al (KED)	813.215 ppb	0.8 %
45Sc (KED)	133.373 %	1.5 %
51V (KED)	1.476 ppb	1.4 %
52Cr (KED)	2.918 ppb	1.1 %
55Mn (KED)	18.842 ppb	1.0 %
56Fe (KED)	914.271 ppb	1.8 %
58Ni (KED)	4.399 ppb	1.7 %
59Co (KED)	0.401 ppb	3.8 %
63Cu (KED)	10.402 ppb	1.5 %
64Zn (KED)	151.567 ppb	2.6 %
69Ga (KED)	2.135 ppb	2.1 %
75As (KED)	0.499 ppb	8.7 %
80Se (KED)	0.243 ppb	143.3 %
85Rb (KED)	2.971 ppb	3.4 %
88Sr (KED)	9.060 ppb	1.8 %
89Y (KED)	108.734 %	1.0 %
107Ag (KED)	0.095 ppb	2.7 %
114Cd (KED)	0.050 ppb	3.1 %
115In (KED)	95.338 %	3.0 %
133Cs (KED)	0.168 ppb	4.0 %
138Ba (KED)	7.994 ppb	0.8 %
139La (KED)	0.798 ppb	1.6 %
140Ce (KED)	1.608 ppb	0.2 %
141Pr (KED)	0.190 ppb	1.3 %
142Nd (KED)	0.985 ppb	0.8 %
152Sm (KED)	0.135 ppb	1.9 %
153Eu (KED)	0.026 ppb	1.9 %
158Gd (KED)	0.120 ppb	6.0 %
159Tb (KED)	90.146 %	1.3 %
164Dy (KED)	0.077 ppb	1.8 %
166Er (KED)	0.040 ppb	4.1 %
169Tm (KED)	0.005 ppb	2.7 %
174Yb (KED)	0.031 ppb	5.5 %
175Lu (KED)	-0.012 ppb	6.9 %
205Tl (KED)	0.013 ppb	4.2 %
208Pb (KED)	0.955 ppb	0.6 %
209Bi (KED)	73.797 %	1.1 %
232Th (KED)	0.278 ppb	1.3 %
238U (KED)	0.068 ppb	2.9 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	130.759 %	3,194 cps	3.8 %
9Be (KED)	0.031 ppb	4 cps	114.6 %
11B (KED)	-17.545 ppb	589 cps	5.7 %
24Mg (KED)	697.473 ppb	398,803 cps	0.9 %
27Al (KED)	813.215 ppb	124,625 cps	2.0 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	133.373 %	51,048 cps	1.5 %
51V (KED)	1.476 ppb	12,740 cps	2.6 %
52Cr (KED)	2.918 ppb	39,692 cps	1.5 %
55Mn (KED)	18.842 ppb	135,125 cps	0.5 %
56Fe (KED)	914.271 ppb	11,353,198 cps	1.0 %
58Ni (KED)	4.399 ppb	68,268 cps	0.9 %
59Co (KED)	0.401 ppb	10,513 cps	2.3 %
63Cu (KED)	10.402 ppb	164,149 cps	0.8 %
64Zn (KED)	151.567 ppb	644,222 cps	1.6 %
69Ga (KED)	2.135 ppb	12,018 cps	1.8 %
75As (KED)	0.499 ppb	646 cps	9.6 %
80Se (KED)	0.243 ppb	1,496 cps	9.0 %
85Rb (KED)	2.971 ppb	16,709 cps	2.8 %
88Sr (KED)	9.060 ppb	74,766 cps	1.2 %
89Y (KED)	108.734 %	423,514 cps	1.0 %
107Ag (KED)	0.095 ppb	4,350 cps	5.6 %
114Cd (KED)	0.050 ppb	907 cps	5.3 %
115In (KED)	95.338 %	723,930 cps	3.0 %
133Cs (KED)	0.168 ppb	4,616 cps	4.6 %
138Ba (KED)	7.994 ppb	288,063 cps	2.1 %
139La (KED)	0.798 ppb	58,170 cps	0.4 %
140Ce (KED)	1.608 ppb	156,093 cps	1.1 %
141Pr (KED)	0.190 ppb	19,717 cps	1.2 %
142Nd (KED)	0.985 ppb	41,193 cps	1.2 %
152Sm (KED)	0.135 ppb	5,338 cps	0.6 %
153Eu (KED)	0.026 ppb	2,076 cps	3.1 %
158Gd (KED)	0.120 ppb	6,377 cps	5.1 %
159Tb (KED)	90.146 %	3,838,373 cps	1.3 %
164Dy (KED)	0.077 ppb	4,829 cps	1.0 %
166Er (KED)	0.040 ppb	3,232 cps	4.8 %
169Tm (KED)	0.005 ppb	1,342 cps	1.9 %
174Yb (KED)	0.031 ppb	2,790 cps	4.1 %
175Lu (KED)	-0.012 ppb	16,800 cps	1.7 %
205Tl (KED)	0.013 ppb	1,899 cps	3.1 %
208Pb (KED)	0.955 ppb	128,724 cps	1.0 %
209Bi (KED)	73.797 %	2,874,327 cps	1.1 %
232Th (KED)	0.278 ppb	62,318 cps	1.0 %
238U (KED)	0.068 ppb	17,917 cps	3.1 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 21

Analysis name: 048723(178655)jian

Analysis started at: 9/30/2021 12:50:46 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	125.845 %	3.2 %
9Be (KED)	0.023 ppb	173.2 %
11B (KED)	-16.013 ppb	5.6 %
24Mg (KED)	1,076.674 ppb	4.6 %
27Al (KED)	1,357.459 ppb	0.8 %
45Sc (KED)	129.899 %	1.1 %
51V (KED)	2.411 ppb	0.6 %
52Cr (KED)	3.015 ppb	2.1 %
55Mn (KED)	33.060 ppb	0.9 %
56Fe (KED)	1,486.421 ppb	1.0 %
58Ni (KED)	6.380 ppb	2.1 %
59Co (KED)	0.628 ppb	0.7 %
63Cu (KED)	10.469 ppb	1.1 %
64Zn (KED)	140.757 ppb	1.2 %
69Ga (KED)	2.666 ppb	1.8 %
75As (KED)	0.751 ppb	3.8 %
80Se (KED)	0.012 ppb	1,820.5 %
85Rb (KED)	3.401 ppb	3.3 %
88Sr (KED)	16.588 ppb	1.1 %
89Y (KED)	117.507 %	1.2 %
107Ag (KED)	0.035 ppb	4.0 %
114Cd (KED)	0.053 ppb	11.4 %
115In (KED)	107.815 %	1.7 %
133Cs (KED)	0.273 ppb	0.3 %
138Ba (KED)	10.866 ppb	1.7 %
139La (KED)	1.450 ppb	1.5 %
140Ce (KED)	2.987 ppb	1.7 %
141Pr (KED)	0.349 ppb	0.4 %
142Nd (KED)	1.788 ppb	1.2 %
152Sm (KED)	0.236 ppb	1.7 %
153Eu (KED)	0.044 ppb	4.0 %
158Gd (KED)	0.200 ppb	0.8 %
159Tb (KED)	109.105 %	1.2 %
164Dy (KED)	0.132 ppb	2.6 %
166Er (KED)	0.063 ppb	1.3 %
169Tm (KED)	0.008 ppb	6.7 %
174Yb (KED)	0.050 ppb	1.6 %
175Lu (KED)	-0.008 ppb	66.4 %
205Tl (KED)	0.020 ppb	1.8 %
208Pb (KED)	1.431 ppb	1.3 %
209Bi (KED)	89.901 %	2.0 %
232Th (KED)	0.512 ppb	0.9 %
238U (KED)	0.111 ppb	0.7 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	125.845 %	3,074 cps	3.2 %
9Be (KED)	0.023 ppb	3 cps	173.2 %
11B (KED)	-16.013 ppb	684 cps	7.6 %
24Mg (KED)	1,076.674 ppb	592,157 cps	1.7 %
27Al (KED)	1,357.459 ppb	202,471 cps	1.3 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	129.899 %	49,718 cps	1.1 %
51V (KED)	2.411 ppb	20,251 cps	1.3 %
52Cr (KED)	3.015 ppb	39,936 cps	2.0 %
55Mn (KED)	33.060 ppb	230,475 cps	0.5 %
56Fe (KED)	1,486.421 ppb	17,972,949 cps	0.7 %
58Ni (KED)	6.380 ppb	96,182 cps	1.4 %
59Co (KED)	0.628 ppb	15,989 cps	0.5 %
63Cu (KED)	10.469 ppb	178,524 cps	0.9 %
64Zn (KED)	140.757 ppb	646,745 cps	0.1 %
69Ga (KED)	2.666 ppb	16,191 cps	0.6 %
75As (KED)	0.751 ppb	1,040 cps	4.9 %
80Se (KED)	0.012 ppb	1,521 cps	4.7 %
85Rb (KED)	3.401 ppb	20,662 cps	2.3 %
88Sr (KED)	16.588 ppb	147,689 cps	0.5 %
89Y (KED)	117.507 %	457,687 cps	1.2 %
107Ag (KED)	0.035 ppb	1,896 cps	2.5 %
114Cd (KED)	0.053 ppb	1,071 cps	8.8 %
115In (KED)	107.815 %	818,675 cps	1.7 %
133Cs (KED)	0.273 ppb	8,458 cps	1.8 %
138Ba (KED)	10.866 ppb	472,910 cps	1.0 %
139La (KED)	1.450 ppb	127,801 cps	0.5 %
140Ce (KED)	2.987 ppb	350,491 cps	0.5 %
141Pr (KED)	0.349 ppb	43,787 cps	1.2 %
142Nd (KED)	1.788 ppb	90,430 cps	1.3 %
152Sm (KED)	0.236 ppb	11,272 cps	2.3 %
153Eu (KED)	0.044 ppb	4,207 cps	3.1 %
158Gd (KED)	0.200 ppb	12,854 cps	1.9 %
159Tb (KED)	109.105 %	4,645,622 cps	1.2 %
164Dy (KED)	0.132 ppb	9,946 cps	3.7 %
166Er (KED)	0.063 ppb	5,956 cps	1.4 %
169Tm (KED)	0.008 ppb	2,498 cps	6.9 %
174Yb (KED)	0.050 ppb	5,475 cps	0.6 %
175Lu (KED)	-0.008 ppb	21,062 cps	5.4 %
205Tl (KED)	0.020 ppb	3,658 cps	2.9 %
208Pb (KED)	1.431 ppb	216,092 cps	1.4 %
209Bi (KED)	89.901 %	3,501,545 cps	2.0 %
232Th (KED)	0.512 ppb	137,781 cps	2.4 %
238U (KED)	0.111 ppb	34,936 cps	1.3 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 22

Analysis name: 178640jian

Analysis started at: 9/30/2021 1:29:11 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	133.034 %	2.1 %
9Be (KED)	0.037 ppb	67.8 %
11B (KED)	-15.904 ppb	3.2 %
24Mg (KED)	1,296.841 ppb	1.5 %
27Al (KED)	1,599.555 ppb	0.8 %
45Sc (KED)	133.087 %	1.3 %
51V (KED)	2.778 ppb	1.4 %
52Cr (KED)	3.423 ppb	2.0 %
55Mn (KED)	39.832 ppb	2.4 %
56Fe (KED)	1,597.912 ppb	0.9 %
58Ni (KED)	7.031 ppb	2.1 %
59Co (KED)	0.731 ppb	1.7 %
63Cu (KED)	11.021 ppb	1.5 %
64Zn (KED)	143.218 ppb	1.1 %
69Ga (KED)	2.907 ppb	0.5 %
75As (KED)	0.823 ppb	8.4 %
80Se (KED)	-0.253 ppb	30.3 %
85Rb (KED)	3.503 ppb	2.8 %
88Sr (KED)	19.685 ppb	1.3 %
89Y (KED)	119.981 %	1.4 %
107Ag (KED)	0.108 ppb	4.7 %
114Cd (KED)	0.072 ppb	2.8 %
115In (KED)	106.692 %	1.5 %
133Cs (KED)	0.337 ppb	3.5 %
138Ba (KED)	12.222 ppb	1.7 %
139La (KED)	1.374 ppb	1.0 %
140Ce (KED)	3.204 ppb	0.5 %
141Pr (KED)	0.332 ppb	0.9 %
142Nd (KED)	1.882 ppb	0.8 %
152Sm (KED)	0.250 ppb	3.5 %
153Eu (KED)	0.047 ppb	2.2 %
158Gd (KED)	0.221 ppb	1.5 %
159Tb (KED)	106.393 %	0.3 %
164Dy (KED)	0.148 ppb	3.3 %
166Er (KED)	0.068 ppb	3.4 %
169Tm (KED)	0.009 ppb	3.8 %
174Yb (KED)	0.056 ppb	1.3 %
175Lu (KED)	-0.008 ppb	12.7 %
205Tl (KED)	0.023 ppb	3.5 %
208Pb (KED)	1.887 ppb	2.4 %
209Bi (KED)	88.388 %	0.5 %
232Th (KED)	0.522 ppb	1.9 %
238U (KED)	0.132 ppb	0.1 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	133.034 %	3,249 cps	2.1 %
9Be (KED)	0.037 ppb	6 cps	69.3 %
11B (KED)	-15.904 ppb	733 cps	4.4 %
24Mg (KED)	1,296.841 ppb	754,397 cps	1.0 %
27Al (KED)	1,599.555 ppb	244,386 cps	0.7 %

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	133.087 %	50,938 cps	1.3 %
51V (KED)	2.778 ppb	23,903 cps	1.0 %
52Cr (KED)	3.423 ppb	46,421 cps	2.1 %
55Mn (KED)	39.832 ppb	284,335 cps	1.3 %
56Fe (KED)	1,597.912 ppb	19,794,143 cps	0.5 %
58Ni (KED)	7.031 ppb	108,529 cps	1.1 %
59Co (KED)	0.731 ppb	19,051 cps	0.4 %
63Cu (KED)	11.021 ppb	191,841 cps	0.2 %
64Zn (KED)	143.218 ppb	671,862 cps	0.4 %
69Ga (KED)	2.907 ppb	18,021 cps	1.5 %
75As (KED)	0.823 ppb	1,162 cps	9.6 %
80Se (KED)	-0.253 ppb	1,443 cps	2.6 %
85Rb (KED)	3.503 ppb	21,728 cps	1.7 %
88Sr (KED)	19.685 ppb	178,897 cps	0.5 %
89Y (KED)	119.981 %	467,322 cps	1.4 %
107Ag (KED)	0.108 ppb	5,527 cps	3.6 %
114Cd (KED)	0.072 ppb	1,413 cps	3.5 %
115In (KED)	106.692 %	810,148 cps	1.5 %
133Cs (KED)	0.337 ppb	10,284 cps	2.0 %
138Ba (KED)	12.222 ppb	518,459 cps	1.9 %
139La (KED)	1.374 ppb	118,115 cps	1.0 %
140Ce (KED)	3.204 ppb	366,669 cps	0.3 %
141Pr (KED)	0.332 ppb	40,679 cps	1.2 %
142Nd (KED)	1.882 ppb	92,852 cps	1.1 %
152Sm (KED)	0.250 ppb	11,653 cps	3.7 %
153Eu (KED)	0.047 ppb	4,442 cps	2.4 %
158Gd (KED)	0.221 ppb	13,822 cps	1.4 %
159Tb (KED)	106.393 %	4,530,157 cps	0.3 %
164Dy (KED)	0.148 ppb	10,830 cps	3.4 %
166Er (KED)	0.068 ppb	6,327 cps	3.0 %
169Tm (KED)	0.009 ppb	2,697 cps	3.4 %
174Yb (KED)	0.056 ppb	5,948 cps	1.3 %
175Lu (KED)	-0.008 ppb	20,622 cps	0.5 %
205Tl (KED)	0.023 ppb	4,168 cps	3.9 %
208Pb (KED)	1.887 ppb	268,364 cps	1.8 %
209Bi (KED)	88.388 %	3,442,603 cps	0.5 %
232Th (KED)	0.522 ppb	137,930 cps	2.0 %
238U (KED)	0.132 ppb	40,728 cps	0.5 %

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 23

Analysis name: 026370(1786187)jian

Analysis started at: 9/30/2021 1:33:40 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	135.901 %	3.5 %
9Be (KED)	0.065 ppb	53.9 %
11B (KED)	-18.858 ppb	1.9 %
24Mg (KED)	1,348.737 ppb	5.0 %
27Al (KED)	1,676.855 ppb	2.4 %
45Sc (KED)	133.688 %	1.6 %
51V (KED)	3.042 ppb	2.4 %
52Cr (KED)	3.760 ppb	3.5 %
55Mn (KED)	41.687 ppb	1.7 %
56Fe (KED)	1,909.695 ppb	1.6 %
58Ni (KED)	8.641 ppb	1.6 %
59Co (KED)	0.791 ppb	2.3 %
63Cu (KED)	11.889 ppb	2.1 %
64Zn (KED)	149.150 ppb	0.4 %
69Ga (KED)	3.092 ppb	1.6 %
75As (KED)	0.884 ppb	2.9 %
80Se (KED)	-0.371 ppb	16.9 %
85Rb (KED)	4.101 ppb	0.5 %
88Sr (KED)	18.955 ppb	0.8 %
89Y (KED)	119.501 %	1.0 %
107Ag (KED)	0.098 ppb	1.1 %
114Cd (KED)	0.048 ppb	9.0 %
115In (KED)	104.228 %	3.1 %
133Cs (KED)	0.359 ppb	2.9 %
138Ba (KED)	12.947 ppb	1.6 %
139La (KED)	1.548 ppb	2.4 %
140Ce (KED)	3.200 ppb	1.0 %
141Pr (KED)	0.370 ppb	1.3 %
142Nd (KED)	1.966 ppb	1.8 %
152Sm (KED)	0.287 ppb	3.3 %
153Eu (KED)	0.055 ppb	1.4 %
158Gd (KED)	0.252 ppb	1.3 %
159Tb (KED)	103.152 %	1.4 %
164Dy (KED)	0.175 ppb	3.1 %
166Er (KED)	0.084 ppb	2.0 %
169Tm (KED)	0.011 ppb	2.0 %
174Yb (KED)	0.065 ppb	1.6 %
175Lu (KED)	-0.007 ppb	15.0 %
205Tl (KED)	0.026 ppb	2.7 %
208Pb (KED)	1.650 ppb	0.8 %
209Bi (KED)	85.645 %	1.0 %
232Th (KED)	0.626 ppb	1.1 %
238U (KED)	0.147 ppb	0.3 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	135.901 %	3,319 cps	3.5 %
9Be (KED)	0.065 ppb	10 cps	57.7 %
11B (KED)	-18.858 ppb	501 cps	5.3 %
24Mg (KED)	1,348.737 ppb	800,666 cps	1.6 %
27Al (KED)	1,676.855 ppb	257,294 cps	0.9 %

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	133.688 %	51,168 cps	1.6 %
51V (KED)	3.042 ppb	26,280 cps	1.6 %
52Cr (KED)	3.760 ppb	51,173 cps	2.0 %
55Mn (KED)	41.687 ppb	298,903 cps	0.7 %
56Fe (KED)	1,909.695 ppb	23,759,322 cps	0.7 %
58Ni (KED)	8.641 ppb	133,852 cps	0.2 %
59Co (KED)	0.791 ppb	20,697 cps	1.1 %
63Cu (KED)	11.889 ppb	206,046 cps	1.2 %
64Zn (KED)	149.150 ppb	696,858 cps	0.6 %
69Ga (KED)	3.092 ppb	19,082 cps	1.6 %
75As (KED)	0.884 ppb	1,242 cps	3.4 %
80Se (KED)	-0.371 ppb	1,389 cps	2.6 %
85Rb (KED)	4.101 ppb	25,338 cps	0.5 %
88Sr (KED)	18.955 ppb	171,595 cps	0.7 %
89Y (KED)	119.501 %	465,452 cps	1.0 %
107Ag (KED)	0.098 ppb	4,912 cps	3.6 %
114Cd (KED)	0.048 ppb	944 cps	5.2 %
115In (KED)	104.228 %	791,437 cps	3.1 %
133Cs (KED)	0.359 ppb	10,703 cps	1.6 %
138Ba (KED)	12.947 ppb	532,253 cps	0.5 %
139La (KED)	1.548 ppb	128,992 cps	1.0 %
140Ce (KED)	3.200 ppb	355,042 cps	1.4 %
141Pr (KED)	0.370 ppb	43,909 cps	1.7 %
142Nd (KED)	1.966 ppb	94,012 cps	0.4 %
152Sm (KED)	0.287 ppb	12,936 cps	1.9 %
153Eu (KED)	0.055 ppb	5,034 cps	1.8 %
158Gd (KED)	0.252 ppb	15,323 cps	2.6 %
159Tb (KED)	103.152 %	4,392,163 cps	1.4 %
164Dy (KED)	0.175 ppb	12,457 cps	4.4 %
166Er (KED)	0.084 ppb	7,473 cps	2.8 %
169Tm (KED)	0.011 ppb	3,266 cps	3.1 %
174Yb (KED)	0.065 ppb	6,707 cps	2.4 %
175Lu (KED)	-0.007 ppb	20,165 cps	1.3 %
205Tl (KED)	0.026 ppb	4,536 cps	2.7 %
208Pb (KED)	1.650 ppb	231,860 cps	1.3 %
209Bi (KED)	85.645 %	3,335,781 cps	1.0 %
232Th (KED)	0.626 ppb	159,799 cps	0.4 %
238U (KED)	0.147 ppb	43,657 cps	0.8 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 24

Analysis name: 028762(178646)jian

Analysis started at: 9/30/2021 1:38:20 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	131.988 %	3.2 %
9Be (KED)	0.045 ppb	50.9 %
11B (KED)	-8.495 ppb	11.8 %
24Mg (KED)	1,474.177 ppb	4.9 %
27Al (KED)	1,424.583 ppb	1.5 %
45Sc (KED)	135.997 %	1.4 %
51V (KED)	2.628 ppb	0.8 %
52Cr (KED)	3.202 ppb	0.2 %
55Mn (KED)	38.816 ppb	0.6 %
56Fe (KED)	1,660.390 ppb	1.0 %
58Ni (KED)	7.575 ppb	1.2 %
59Co (KED)	0.733 ppb	1.5 %
63Cu (KED)	11.953 ppb	0.9 %
64Zn (KED)	145.108 ppb	1.0 %
69Ga (KED)	3.073 ppb	5.3 %
75As (KED)	0.907 ppb	9.7 %
80Se (KED)	-0.081 ppb	256.7 %
85Rb (KED)	4.551 ppb	2.3 %
88Sr (KED)	19.957 ppb	1.4 %
89Y (KED)	116.824 %	1.1 %
107Ag (KED)	0.041 ppb	7.4 %
114Cd (KED)	0.061 ppb	6.9 %
115In (KED)	102.680 %	1.6 %
133Cs (KED)	0.310 ppb	4.3 %
138Ba (KED)	12.602 ppb	1.5 %
139La (KED)	1.435 ppb	1.4 %
140Ce (KED)	2.995 ppb	2.7 %
141Pr (KED)	0.351 ppb	1.6 %
142Nd (KED)	1.829 ppb	2.1 %
152Sm (KED)	0.261 ppb	3.2 %
153Eu (KED)	0.048 ppb	2.6 %
158Gd (KED)	0.224 ppb	2.4 %
159Tb (KED)	100.566 %	1.4 %
164Dy (KED)	0.152 ppb	0.8 %
166Er (KED)	0.073 ppb	3.1 %
169Tm (KED)	0.010 ppb	3.3 %
174Yb (KED)	0.057 ppb	1.9 %
175Lu (KED)	-0.007 ppb	31.1 %
205Tl (KED)	0.027 ppb	3.1 %
208Pb (KED)	1.817 ppb	1.7 %
209Bi (KED)	81.839 %	1.2 %
232Th (KED)	0.585 ppb	0.9 %
238U (KED)	0.154 ppb	0.8 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	131.988 %	3,224 cps	3.2 %
9Be (KED)	0.045 ppb	7 cps	50.0 %
11B (KED)	-8.495 ppb	1,331 cps	4.1 %
24Mg (KED)	1,474.177 ppb	849,970 cps	1.8 %
27Al (KED)	1,424.583 ppb	222,422 cps	0.8 %

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	135.997 %	52,052 cps	1.4 %
51V (KED)	2.628 ppb	23,107 cps	0.6 %
52Cr (KED)	3.202 ppb	44,382 cps	1.4 %
55Mn (KED)	38.816 ppb	283,200 cps	0.8 %
56Fe (KED)	1,660.390 ppb	21,019,101 cps	1.8 %
58Ni (KED)	7.575 ppb	119,461 cps	0.9 %
59Co (KED)	0.733 ppb	19,515 cps	1.6 %
63Cu (KED)	11.953 ppb	202,519 cps	0.5 %
64Zn (KED)	145.108 ppb	662,814 cps	0.2 %
69Ga (KED)	3.073 ppb	18,539 cps	5.1 %
75As (KED)	0.907 ppb	1,245 cps	8.8 %
80Se (KED)	-0.081 ppb	1,475 cps	4.6 %
85Rb (KED)	4.551 ppb	27,486 cps	3.4 %
88Sr (KED)	19.957 ppb	176,591 cps	0.5 %
89Y (KED)	116.824 %	455,026 cps	1.1 %
107Ag (KED)	0.041 ppb	2,099 cps	5.9 %
114Cd (KED)	0.061 ppb	1,173 cps	7.2 %
115In (KED)	102.680 %	779,682 cps	1.6 %
133Cs (KED)	0.310 ppb	9,123 cps	2.6 %
138Ba (KED)	12.602 ppb	505,162 cps	0.2 %
139La (KED)	1.435 ppb	116,618 cps	2.0 %
140Ce (KED)	2.995 ppb	323,882 cps	1.4 %
141Pr (KED)	0.351 ppb	40,626 cps	1.7 %
142Nd (KED)	1.829 ppb	85,265 cps	1.3 %
152Sm (KED)	0.261 ppb	11,480 cps	4.2 %
153Eu (KED)	0.048 ppb	4,277 cps	3.8 %
158Gd (KED)	0.224 ppb	13,254 cps	2.5 %
159Tb (KED)	100.566 %	4,282,063 cps	1.4 %
164Dy (KED)	0.152 ppb	10,577 cps	1.7 %
166Er (KED)	0.073 ppb	6,331 cps	3.1 %
169Tm (KED)	0.010 ppb	2,863 cps	3.5 %
174Yb (KED)	0.057 ppb	5,708 cps	1.8 %
175Lu (KED)	-0.007 ppb	19,558 cps	0.9 %
205Tl (KED)	0.027 ppb	4,429 cps	3.1 %
208Pb (KED)	1.817 ppb	240,600 cps	2.6 %
209Bi (KED)	81.839 %	3,187,546 cps	1.2 %
232Th (KED)	0.585 ppb	142,846 cps	1.6 %
238U (KED)	0.154 ppb	43,854 cps	1.7 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 25

Analysis name: 048732(179400)jian

Analysis started at: 9/30/2021 1:42:35 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	127.619 %	4.7 %
9Be (KED)	0.063 ppb	82.1 %
11B (KED)	-9.175 ppb	8.5 %
24Mg (KED)	1,267.834 ppb	5.5 %
27Al (KED)	1,600.232 ppb	0.6 %
45Sc (KED)	136.000 %	1.1 %
51V (KED)	2.725 ppb	1.3 %
52Cr (KED)	3.076 ppb	2.2 %
55Mn (KED)	36.076 ppb	2.1 %
56Fe (KED)	1,605.627 ppb	1.5 %
58Ni (KED)	6.646 ppb	2.4 %
59Co (KED)	0.661 ppb	2.2 %
63Cu (KED)	12.316 ppb	1.2 %
64Zn (KED)	150.234 ppb	1.8 %
69Ga (KED)	3.039 ppb	0.4 %
75As (KED)	0.838 ppb	6.6 %
80Se (KED)	-0.137 ppb	142.0 %
85Rb (KED)	3.430 ppb	0.4 %
88Sr (KED)	17.998 ppb	2.1 %
89Y (KED)	116.184 %	0.7 %
107Ag (KED)	0.083 ppb	1.2 %
114Cd (KED)	0.051 ppb	11.0 %
115In (KED)	101.734 %	0.8 %
133Cs (KED)	0.327 ppb	2.3 %
138Ba (KED)	12.170 ppb	2.0 %
139La (KED)	1.354 ppb	1.8 %
140Ce (KED)	2.878 ppb	0.8 %
141Pr (KED)	0.334 ppb	2.0 %
142Nd (KED)	1.754 ppb	2.4 %
152Sm (KED)	0.248 ppb	2.3 %
153Eu (KED)	0.046 ppb	2.7 %
158Gd (KED)	0.209 ppb	2.3 %
159Tb (KED)	98.891 %	2.1 %
164Dy (KED)	0.146 ppb	4.6 %
166Er (KED)	0.073 ppb	4.8 %
169Tm (KED)	0.009 ppb	4.9 %
174Yb (KED)	0.055 ppb	3.2 %
175Lu (KED)	-0.012 ppb	16.7 %
205Tl (KED)	0.023 ppb	3.2 %
208Pb (KED)	1.609 ppb	1.8 %
209Bi (KED)	81.739 %	0.5 %
232Th (KED)	0.532 ppb	2.7 %
238U (KED)	0.131 ppb	1.6 %

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	127.619 %	3,117 cps	4.7 %
9Be (KED)	0.063 ppb	9 cps	78.1 %
11B (KED)	-9.175 ppb	1,233 cps	3.4 %
24Mg (KED)	1,267.834 ppb	706,463 cps	1.0 %
27Al (KED)	1,600.232 ppb	249,844 cps	0.6 %

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	136.000 %	52,053 cps	1.1 %
51V (KED)	2.725 ppb	23,960 cps	1.7 %
52Cr (KED)	3.076 ppb	42,645 cps	1.2 %
55Mn (KED)	36.076 ppb	263,228 cps	1.2 %
56Fe (KED)	1,605.627 ppb	20,325,180 cps	1.3 %
58Ni (KED)	6.646 ppb	104,873 cps	1.4 %
59Co (KED)	0.661 ppb	17,611 cps	1.3 %
63Cu (KED)	12.316 ppb	207,515 cps	1.2 %
64Zn (KED)	150.234 ppb	682,384 cps	1.1 %
69Ga (KED)	3.039 ppb	18,238 cps	0.5 %
75As (KED)	0.838 ppb	1,146 cps	5.7 %
80Se (KED)	-0.137 ppb	1,445 cps	4.9 %
85Rb (KED)	3.430 ppb	20,610 cps	1.1 %
88Sr (KED)	17.998 ppb	158,421 cps	1.7 %
89Y (KED)	116.184 %	452,532 cps	0.7 %
107Ag (KED)	0.083 ppb	4,070 cps	1.2 %
114Cd (KED)	0.051 ppb	977 cps	9.4 %
115In (KED)	101.734 %	772,496 cps	0.8 %
133Cs (KED)	0.327 ppb	9,537 cps	1.4 %
138Ba (KED)	12.170 ppb	479,744 cps	0.5 %
139La (KED)	1.354 ppb	108,191 cps	3.0 %
140Ce (KED)	2.878 ppb	306,134 cps	1.4 %
141Pr (KED)	0.334 ppb	37,965 cps	0.1 %
142Nd (KED)	1.754 ppb	80,403 cps	1.0 %
152Sm (KED)	0.248 ppb	10,726 cps	0.9 %
153Eu (KED)	0.046 ppb	4,046 cps	4.8 %
158Gd (KED)	0.209 ppb	12,140 cps	0.4 %
159Tb (KED)	98.891 %	4,210,742 cps	2.1 %
164Dy (KED)	0.146 ppb	9,953 cps	2.7 %
166Er (KED)	0.073 ppb	6,208 cps	2.9 %
169Tm (KED)	0.009 ppb	2,536 cps	4.0 %
174Yb (KED)	0.055 ppb	5,433 cps	1.0 %
175Lu (KED)	-0.012 ppb	18,413 cps	0.6 %
205Tl (KED)	0.023 ppb	3,864 cps	3.1 %
208Pb (KED)	1.609 ppb	216,668 cps	1.3 %
209Bi (KED)	81.739 %	3,183,627 cps	0.5 %
232Th (KED)	0.532 ppb	129,937 cps	2.4 %
238U (KED)	0.131 ppb	37,297 cps	1.8 %

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 26

Analysis name: 047672(179380)jian

Analysis started at: 9/30/2021 1:46:34 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	132.807 %	
9Be (KED)	0.067 ppb	
11B (KED)	-15.326 ppb	
24Mg (KED)	1,424.514 ppb	
27Al (KED)	1,706.131 ppb	
45Sc (KED)	133.365 %	
51V (KED)	3.164 ppb	
52Cr (KED)	4.383 ppb	
55Mn (KED)	43.749 ppb	
56Fe (KED)	1,969.496 ppb	
58Ni (KED)	8.565 ppb	
59Co (KED)	0.834 ppb	
63Cu (KED)	12.065 ppb	
64Zn (KED)	157.897 ppb	
69Ga (KED)	3.423 ppb	
75As (KED)	1.014 ppb	
80Se (KED)	0.115 ppb	
85Rb (KED)	4.414 ppb	
88Sr (KED)	21.754 ppb	
89Y (KED)	115.701 %	
107Ag (KED)	0.048 ppb	
114Cd (KED)	0.045 ppb	
115In (KED)	101.432 %	
133Cs (KED)	0.371 ppb	
138Ba (KED)	13.830 ppb	
139La (KED)	1.898 ppb	
140Ce (KED)	3.719 ppb	
141Pr (KED)	0.423 ppb	
142Nd (KED)	2.202 ppb	
152Sm (KED)	0.304 ppb	
153Eu (KED)	0.059 ppb	
158Gd (KED)	0.263 ppb	
159Tb (KED)	98.113 %	
164Dy (KED)	0.179 ppb	
166Er (KED)	0.088 ppb	
169Tm (KED)	0.011 ppb	
174Yb (KED)	0.064 ppb	
175Lu (KED)	-0.010 ppb	
205Tl (KED)	0.026 ppb	
208Pb (KED)	1.722 ppb	
209Bi (KED)	80.575 %	
232Th (KED)	0.683 ppb	
238U (KED)	0.144 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	132.807 %	3,244 cps	
9Be (KED)	0.067 ppb	10 cps	
11B (KED)	-15.326 ppb	780 cps	
24Mg (KED)	1,424.514 ppb	827,320 cps	
27Al (KED)	1,706.131 ppb	261,215 cps	

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	133.365 %	51,044 cps	
51V (KED)	3.164 ppb	27,273 cps	
52Cr (KED)	4.383 ppb	59,485 cps	
55Mn (KED)	43.749 ppb	312,949 cps	
56Fe (KED)	1,969.496 ppb	24,447,531 cps	
58Ni (KED)	8.565 ppb	132,392 cps	
59Co (KED)	0.834 ppb	21,762 cps	
63Cu (KED)	12.065 ppb	202,461 cps	
64Zn (KED)	157.897 ppb	714,162 cps	
69Ga (KED)	3.423 ppb	20,443 cps	
75As (KED)	1.014 ppb	1,377 cps	
80Se (KED)	0.115 ppb	1,540 cps	
85Rb (KED)	4.414 ppb	26,401 cps	
88Sr (KED)	21.754 ppb	190,644 cps	
89Y (KED)	115.701 %	450,652 cps	
107Ag (KED)	0.048 ppb	2,400 cps	
114Cd (KED)	0.045 ppb	870 cps	
115In (KED)	101.432 %	770,208 cps	
133Cs (KED)	0.371 ppb	10,768 cps	
138Ba (KED)	13.830 ppb	540,725 cps	
139La (KED)	1.898 ppb	150,475 cps	
140Ce (KED)	3.719 ppb	392,452 cps	
141Pr (KED)	0.423 ppb	47,718 cps	
142Nd (KED)	2.202 ppb	100,137 cps	
152Sm (KED)	0.304 ppb	13,023 cps	
153Eu (KED)	0.059 ppb	5,094 cps	
158Gd (KED)	0.263 ppb	15,169 cps	
159Tb (KED)	98.113 %	4,177,623 cps	
164Dy (KED)	0.179 ppb	12,113 cps	
166Er (KED)	0.088 ppb	7,402 cps	
169Tm (KED)	0.011 ppb	3,114 cps	
174Yb (KED)	0.064 ppb	6,225 cps	
175Lu (KED)	-0.010 ppb	18,657 cps	
205Tl (KED)	0.026 ppb	4,194 cps	
208Pb (KED)	1.722 ppb	226,235 cps	
209Bi (KED)	80.575 %	3,138,290 cps	
232Th (KED)	0.683 ppb	164,031 cps	
238U (KED)	0.144 ppb	40,218 cps	

Comprehensive

9/30/2021 2:22:41 PM

Sample Summary

Instrument ID: iCAP Q

Analysis index: 27

Analysis name: 028423(178578)jian

Analysis started at: 9/30/2021 1:49:16 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	132.397 %	
9Be (KED)	0.022 ppb	
11B (KED)	-19.451 ppb	
24Mg (KED)	922.732 ppb	
27Al (KED)	1,353.489 ppb	
45Sc (KED)	132.595 %	
51V (KED)	2.329 ppb	
52Cr (KED)	3.021 ppb	
55Mn (KED)	30.985 ppb	
56Fe (KED)	1,355.080 ppb	
58Ni (KED)	5.733 ppb	
59Co (KED)	0.564 ppb	
63Cu (KED)	9.481 ppb	
64Zn (KED)	148.256 ppb	
69Ga (KED)	2.333 ppb	
75As (KED)	0.763 ppb	
80Se (KED)	-0.135 ppb	
85Rb (KED)	3.117 ppb	
88Sr (KED)	15.207 ppb	
89Y (KED)	116.818 %	
107Ag (KED)	0.079 ppb	
114Cd (KED)	0.043 ppb	
115In (KED)	104.503 %	
133Cs (KED)	0.263 ppb	
138Ba (KED)	9.489 ppb	
139La (KED)	1.181 ppb	
140Ce (KED)	2.390 ppb	
141Pr (KED)	0.289 ppb	
142Nd (KED)	1.513 ppb	
152Sm (KED)	0.216 ppb	
153Eu (KED)	0.039 ppb	
158Gd (KED)	0.182 ppb	
159Tb (KED)	102.488 %	
164Dy (KED)	0.126 ppb	
166Er (KED)	0.056 ppb	
169Tm (KED)	0.007 ppb	
174Yb (KED)	0.049 ppb	
175Lu (KED)	-0.013 ppb	
205Tl (KED)	0.019 ppb	
208Pb (KED)	1.576 ppb	
209Bi (KED)	83.435 %	
232Th (KED)	0.443 ppb	
238U (KED)	0.106 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	132.397 %	3,234 cps	
9Be (KED)	0.022 ppb	3 cps	
11B (KED)	-19.451 ppb	440 cps	
24Mg (KED)	922.732 ppb	534,521 cps	
27Al (KED)	1,353.489 ppb	206,069 cps	

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	132.595 %	50,750 cps	
51V (KED)	2.329 ppb	19,966 cps	
52Cr (KED)	3.021 ppb	40,850 cps	
55Mn (KED)	30.985 ppb	220,545 cps	
56Fe (KED)	1,355.080 ppb	16,726,684 cps	
58Ni (KED)	5.733 ppb	88,298 cps	
59Co (KED)	0.564 ppb	14,662 cps	
63Cu (KED)	9.481 ppb	160,832 cps	
64Zn (KED)	148.256 ppb	677,159 cps	
69Ga (KED)	2.333 ppb	14,105 cps	
75As (KED)	0.763 ppb	1,050 cps	
80Se (KED)	-0.135 ppb	1,453 cps	
85Rb (KED)	3.117 ppb	18,834 cps	
88Sr (KED)	15.207 ppb	134,636 cps	
89Y (KED)	116.818 %	455,001 cps	
107Ag (KED)	0.079 ppb	3,971 cps	
114Cd (KED)	0.043 ppb	867 cps	
115In (KED)	104.503 %	793,527 cps	
133Cs (KED)	0.263 ppb	7,879 cps	
138Ba (KED)	9.489 ppb	388,309 cps	
139La (KED)	1.181 ppb	97,802 cps	
140Ce (KED)	2.390 ppb	263,618 cps	
141Pr (KED)	0.289 ppb	34,090 cps	
142Nd (KED)	1.513 ppb	71,893 cps	
152Sm (KED)	0.216 ppb	9,687 cps	
153Eu (KED)	0.039 ppb	3,557 cps	
158Gd (KED)	0.182 ppb	11,012 cps	
159Tb (KED)	102.488 %	4,363,891 cps	
164Dy (KED)	0.126 ppb	8,920 cps	
166Er (KED)	0.056 ppb	5,001 cps	
169Tm (KED)	0.007 ppb	2,110 cps	
174Yb (KED)	0.049 ppb	5,001 cps	
175Lu (KED)	-0.013 ppb	18,861 cps	
205Tl (KED)	0.019 ppb	3,157 cps	
208Pb (KED)	1.576 ppb	217,370 cps	
209Bi (KED)	83.435 %	3,249,689 cps	
232Th (KED)	0.443 ppb	110,971 cps	
238U (KED)	0.106 ppb	31,176 cps	

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 28

Analysis name: 178600jian

Analysis started at: 9/30/2021 1:51:58 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	124.343 %	
9Be (KED)	0.024 ppb	
11B (KED)	-14.722 ppb	
24Mg (KED)	1,403.636 ppb	
27Al (KED)	1,563.503 ppb	
45Sc (KED)	129.998 %	
51V (KED)	2.927 ppb	
52Cr (KED)	4.023 ppb	
55Mn (KED)	38.951 ppb	
56Fe (KED)	1,802.980 ppb	
58Ni (KED)	8.088 ppb	
59Co (KED)	0.789 ppb	
63Cu (KED)	10.899 ppb	
64Zn (KED)	152.178 ppb	
69Ga (KED)	5.389 ppb	
75As (KED)	0.856 ppb	
80Se (KED)	-0.367 ppb	
85Rb (KED)	4.250 ppb	
88Sr (KED)	18.385 ppb	
89Y (KED)	116.614 %	
107Ag (KED)	0.090 ppb	
114Cd (KED)	0.050 ppb	
115In (KED)	102.133 %	
133Cs (KED)	0.343 ppb	
138Ba (KED)	23.403 ppb	
139La (KED)	1.528 ppb	
140Ce (KED)	3.060 ppb	
141Pr (KED)	0.370 ppb	
142Nd (KED)	1.916 ppb	
152Sm (KED)	0.277 ppb	
153Eu (KED)	0.052 ppb	
158Gd (KED)	0.235 ppb	
159Tb (KED)	102.443 %	
164Dy (KED)	0.171 ppb	
166Er (KED)	0.077 ppb	
169Tm (KED)	0.010 ppb	
174Yb (KED)	0.059 ppb	
175Lu (KED)	-0.011 ppb	
205Tl (KED)	0.025 ppb	
208Pb (KED)	1.873 ppb	
209Bi (KED)	82.498 %	
232Th (KED)	0.619 ppb	
238U (KED)	0.141 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	124.343 %	3,037 cps	
9Be (KED)	0.024 ppb	3 cps	
11B (KED)	-14.722 ppb	777 cps	
24Mg (KED)	1,403.636 ppb	763,255 cps	
27Al (KED)	1,563.503 ppb	233,351 cps	

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	129.998 %	49,756 cps	
51V (KED)	2.927 ppb	24,598 cps	
52Cr (KED)	4.023 ppb	53,247 cps	
55Mn (KED)	38.951 ppb	271,660 cps	
56Fe (KED)	1,802.980 ppb	21,816,353 cps	
58Ni (KED)	8.088 ppb	121,895 cps	
59Co (KED)	0.789 ppb	20,089 cps	
63Cu (KED)	10.899 ppb	184,422 cps	
64Zn (KED)	152.178 ppb	693,802 cps	
69Ga (KED)	5.389 ppb	32,389 cps	
75As (KED)	0.856 ppb	1,173 cps	
80Se (KED)	-0.367 ppb	1,357 cps	
85Rb (KED)	4.250 ppb	25,623 cps	
88Sr (KED)	18.385 ppb	162,433 cps	
89Y (KED)	116.614 %	454,208 cps	
107Ag (KED)	0.090 ppb	4,417 cps	
114Cd (KED)	0.050 ppb	977 cps	
115In (KED)	102.133 %	775,528 cps	
133Cs (KED)	0.343 ppb	10,044 cps	
138Ba (KED)	23.403 ppb	953,729 cps	
139La (KED)	1.528 ppb	126,528 cps	
140Ce (KED)	3.060 ppb	337,252 cps	
141Pr (KED)	0.370 ppb	43,643 cps	
142Nd (KED)	1.916 ppb	90,984 cps	
152Sm (KED)	0.277 ppb	12,416 cps	
153Eu (KED)	0.052 ppb	4,724 cps	
158Gd (KED)	0.235 ppb	14,181 cps	
159Tb (KED)	102.443 %	4,361,976 cps	
164Dy (KED)	0.171 ppb	12,053 cps	
166Er (KED)	0.077 ppb	6,782 cps	
169Tm (KED)	0.010 ppb	2,910 cps	
174Yb (KED)	0.059 ppb	6,045 cps	
175Lu (KED)	-0.011 ppb	19,218 cps	
205Tl (KED)	0.025 ppb	4,111 cps	
208Pb (KED)	1.873 ppb	248,930 cps	
209Bi (KED)	82.498 %	3,213,185 cps	
232Th (KED)	0.619 ppb	152,357 cps	
238U (KED)	0.141 ppb	40,392 cps	

Comprehensive

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Sample Summary

Instrument ID: iCAP Q

Analysis index: 29

Analysis name: 14ti

Analysis started at: 9/30/2021 1:54:54 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	127.346 %	
9Be (KED)	0.000 ppb	
11B (KED)	-17.671 ppb	
24Mg (KED)	505.798 ppb	
27Al (KED)	468.648 ppb	
45Sc (KED)	127.655 %	
51V (KED)	0.807 ppb	
52Cr (KED)	1.499 ppb	
55Mn (KED)	13.230 ppb	
56Fe (KED)	517.055 ppb	
58Ni (KED)	2.300 ppb	
59Co (KED)	0.226 ppb	
63Cu (KED)	10.293 ppb	
64Zn (KED)	156.015 ppb	
69Ga (KED)	1.511 ppb	
75As (KED)	0.249 ppb	
80Se (KED)	0.345 ppb	
85Rb (KED)	4.577 ppb	
88Sr (KED)	6.783 ppb	
89Y (KED)	114.372 %	
107Ag (KED)	0.031 ppb	
114Cd (KED)	0.038 ppb	
115In (KED)	105.268 %	
133Cs (KED)	0.085 ppb	
138Ba (KED)	6.339 ppb	
139La (KED)	0.430 ppb	
140Ce (KED)	0.888 ppb	
141Pr (KED)	0.102 ppb	
142Nd (KED)	0.535 ppb	
152Sm (KED)	0.076 ppb	
153Eu (KED)	0.013 ppb	
158Gd (KED)	0.066 ppb	
159Tb (KED)	107.331 %	
164Dy (KED)	0.045 ppb	
166Er (KED)	0.022 ppb	
169Tm (KED)	0.003 ppb	
174Yb (KED)	0.018 ppb	
175Lu (KED)	-0.017 ppb	
205Tl (KED)	0.009 ppb	
208Pb (KED)	0.555 ppb	
209Bi (KED)	88.400 %	
232Th (KED)	0.128 ppb	
238U (KED)	0.029 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	127.346 %	3,110 cps	
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	-17.671 ppb	563 cps	
24Mg (KED)	505.798 ppb	282,160 cps	
27Al (KED)	468.648 ppb	68,819 cps	

Comprehensive

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Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	127.655 %	48,859 cps	
51V (KED)	0.807 ppb	6,678 cps	
52Cr (KED)	1.499 ppb	19,625 cps	
55Mn (KED)	13.230 ppb	90,994 cps	
56Fe (KED)	517.055 ppb	6,150,426 cps	
58Ni (KED)	2.300 ppb	34,431 cps	
59Co (KED)	0.226 ppb	5,708 cps	
63Cu (KED)	10.293 ppb	170,871 cps	
64Zn (KED)	156.015 ppb	697,571 cps	
69Ga (KED)	1.511 ppb	8,977 cps	
75As (KED)	0.249 ppb	347 cps	
80Se (KED)	0.345 ppb	1,613 cps	
85Rb (KED)	4.577 ppb	27,063 cps	
88Sr (KED)	6.783 ppb	58,945 cps	
89Y (KED)	114.372 %	445,475 cps	
107Ag (KED)	0.031 ppb	1,657 cps	
114Cd (KED)	0.038 ppb	780 cps	
115In (KED)	105.268 %	799,334 cps	
133Cs (KED)	0.085 ppb	2,617 cps	
138Ba (KED)	6.339 ppb	272,498 cps	
139La (KED)	0.430 ppb	37,389 cps	
140Ce (KED)	0.888 ppb	102,902 cps	
141Pr (KED)	0.102 ppb	12,640 cps	
142Nd (KED)	0.535 ppb	26,689 cps	
152Sm (KED)	0.076 ppb	3,574 cps	
153Eu (KED)	0.013 ppb	1,287 cps	
158Gd (KED)	0.066 ppb	4,214 cps	
159Tb (KED)	107.331 %	4,570,088 cps	
164Dy (KED)	0.045 ppb	3,364 cps	
166Er (KED)	0.022 ppb	2,240 cps	
169Tm (KED)	0.003 ppb	933 cps	
174Yb (KED)	0.018 ppb	1,960 cps	
175Lu (KED)	-0.017 ppb	19,158 cps	
205Tl (KED)	0.009 ppb	1,617 cps	
208Pb (KED)	0.555 ppb	105,185 cps	
209Bi (KED)	88.400 %	3,443,076 cps	
232Th (KED)	0.128 ppb	35,761 cps	
238U (KED)	0.029 ppb	9,907 cps	