

## Instrument Summary:

Instrument ID: iCAP Q  
Serial Number: Undefined

## Labbook Summary:

Path and filename: \_Application Data\Workspace\LabBooks\wlw\20211009-1.imexp  
Labbook created by: Administrator  
Based on template:  
Hardware configuration: iCAPQ1  
Labbook type: eQuant  
Qtegra version (last saved): 2.7.2425.154  
Labbook started: 10/9/2021 3:13:54 PM  
Labbook finished: 10/9/2021 4:31:10 PM

## Method Summary:

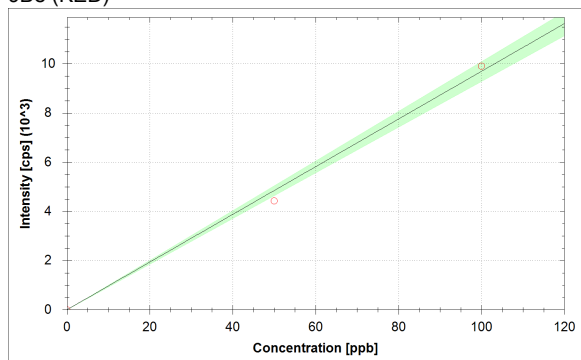
Isotope	Mode	Dwell time (s)	# of Channels	Spacing	Resolution	IS
6Li (KED)	KED	0.03	3	0.1	Normal	
9Be (KED)	KED	0.03	3	0.1	Normal	6Li (KED)
11B (KED)	KED	0.03	3	0.1	Normal	6Li (KED)
24Mg (KED)	KED	0.03	3	0.1	Normal	6Li (KED)
27Al (KED)	KED	0.03	3	0.1	Normal	45Sc (KED)
45Sc (KED)	KED	0.03	3	0.1	Normal	
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)



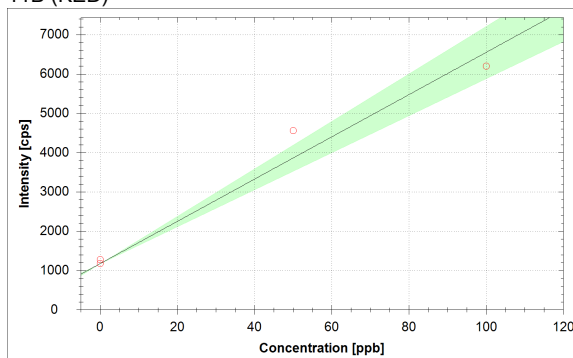
$$f(x) = 96.9239 \cdot x$$

$$R^2 = 0.9965$$

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

$$\text{LoD} = \text{N/A}$$

11B (KED)



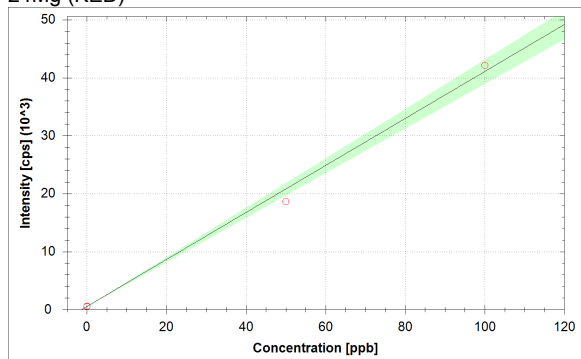
$$f(x) = 53.7544 \cdot x + 1174.1603$$

$$R^2 = 0.9667$$

$$\text{BEC} = 21.843 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

24Mg (KED)



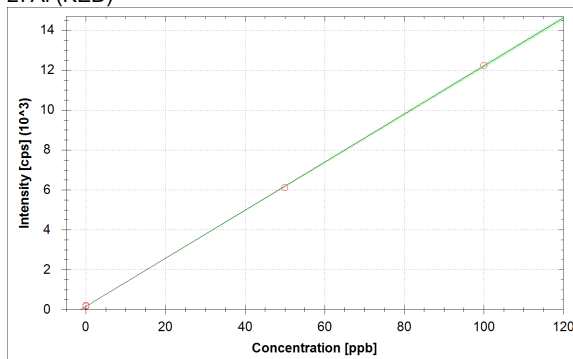
$$f(x) = 405.4058 \cdot x + 531.9246$$

$$R^2 = 0.9950$$

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

$$\text{LoD} = \text{N/A}$$

27Al (KED)



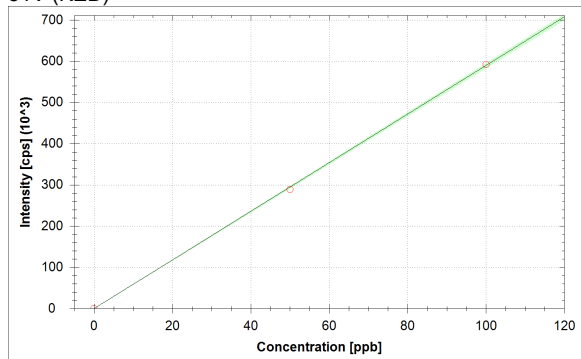
$$f(x) = 120.4281 \cdot x + 159.9485$$

$$R^2 = 0.9999$$

$$\text{BEC} = 1.328 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

51V (KED)



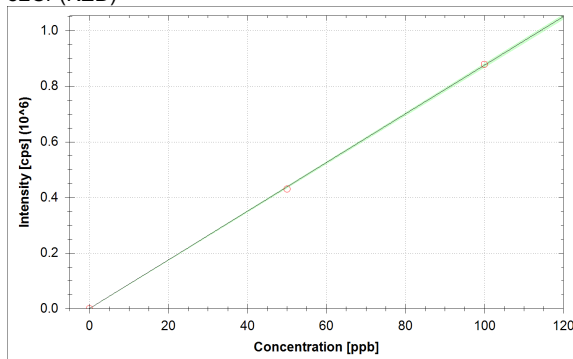
$$f(x) = 5895.7314 \cdot x + 6.3979$$

$$R^2 = 0.9998$$

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

$$\text{LoD} = \text{N/A}$$

52Cr (KED)



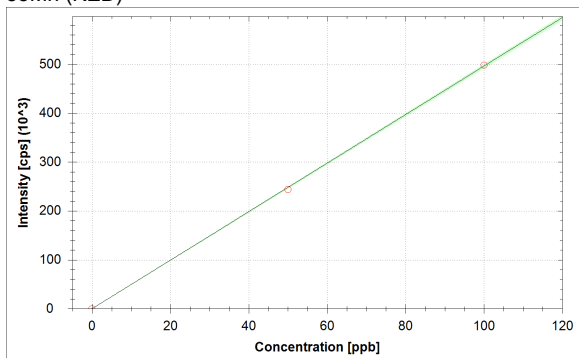
$$f(x) = 8748.8222 \cdot x + 207.9335$$

$$R^2 = 0.9999$$

$$\text{BEC} = 0.024 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

55Mn (KED)



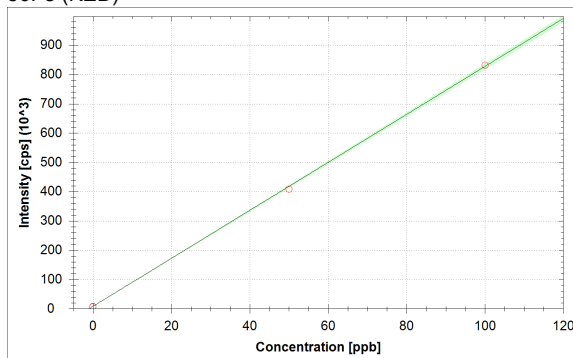
$$f(x) = 4961.0313 \cdot x + 118.3616$$

$$R^2 = 0.9999$$

$$\text{BEC} = 0.024 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

56Fe (KED)



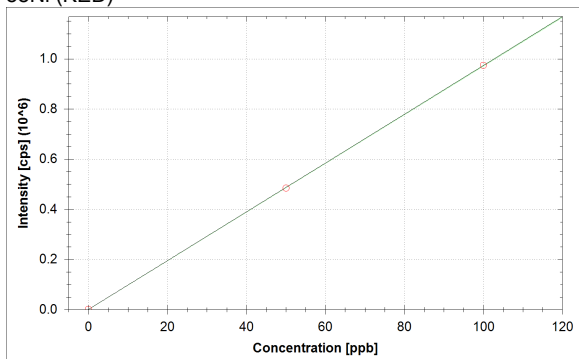
$$f(x) = 8195.1687 \cdot x + 8155.9385$$

$$R^2 = 0.9998$$

$$\text{BEC} = 0.995 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

58Ni (KED)



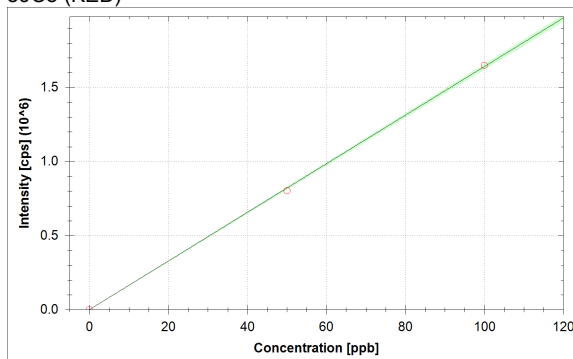
$$f(x) = 9722.7508 \cdot x + 537.4358$$

$$R^2 = 1.0000$$

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

$$\text{LoD} = \text{N/A}$$

59Co (KED)



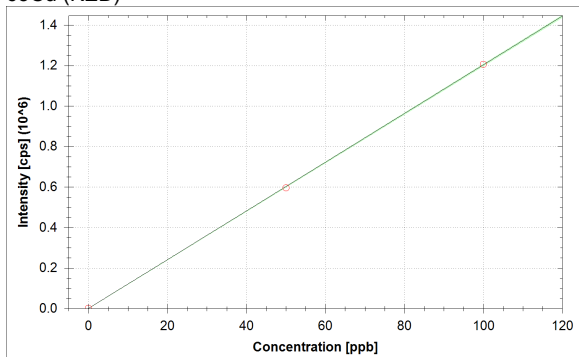
$$f(x) = 16409.1489 \cdot x + 41.5864$$

$$R^2 = 0.9998$$

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

$$\text{LoD} = \text{N/A}$$

63Cu (KED)



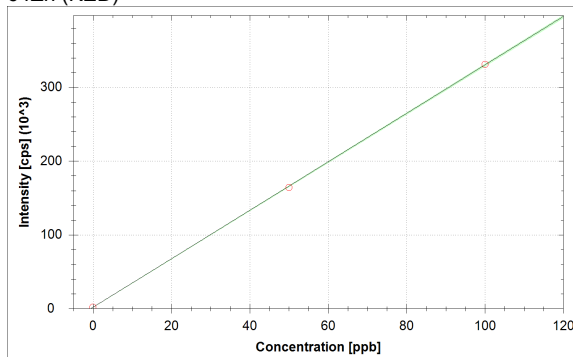
$$f(x) = 12027.1916 \cdot x + 820.1952$$

$$R^2 = 1.0000$$

$$\text{BEC} = 0.068 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

64Zn (KED)



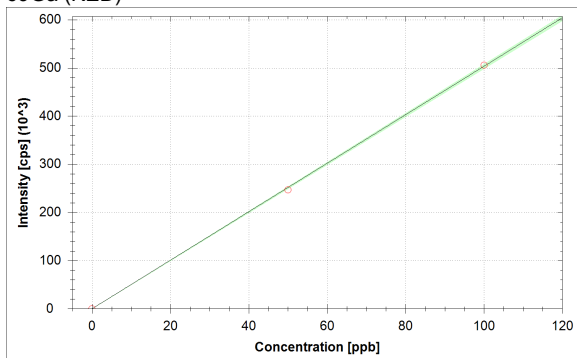
$$f(x) = 3286.3157 \cdot x + 1789.8791$$

$$R^2 = 0.9999$$

$$\text{BEC} = 0.545 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

69Ga (KED)



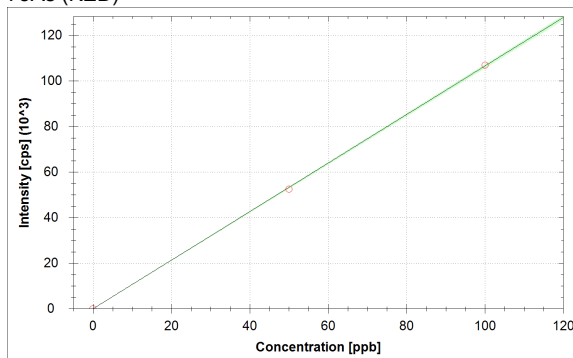
$$f(x) = 5031.9328x + 69.9370$$

$$R^2 = 0.9998$$

$$\text{BEC} = 0.014 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

75As (KED)



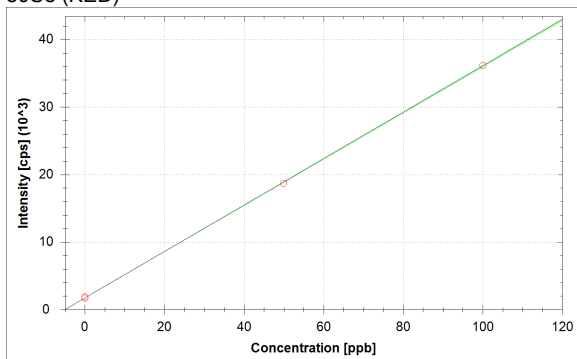
$$f(x) = 1065.4406x + 12.7158$$

$$R^2 = 0.9999$$

$$\text{BEC} = 0.012 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

80Se (KED)



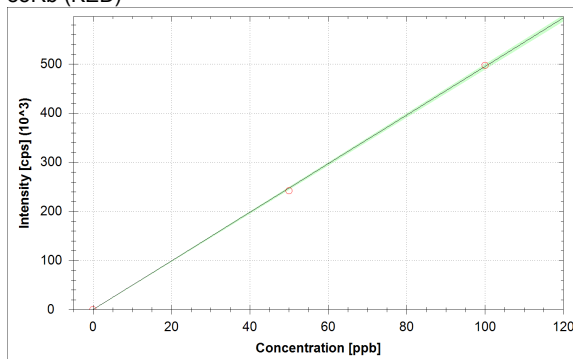
$$f(x) = 343.5572x + 1726.2902$$

$$R^2 = 0.9999$$

$$\text{BEC} = 5.025 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

85Rb (KED)



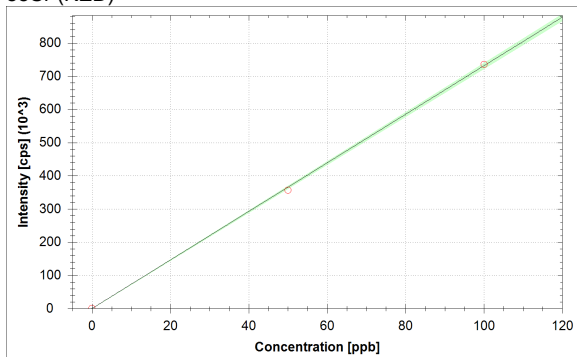
$$f(x) = 4948.4381x + 22.2526$$

$$R^2 = 0.9998$$

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

$$\text{LoD} = \text{N/A}$$

88Sr (KED)



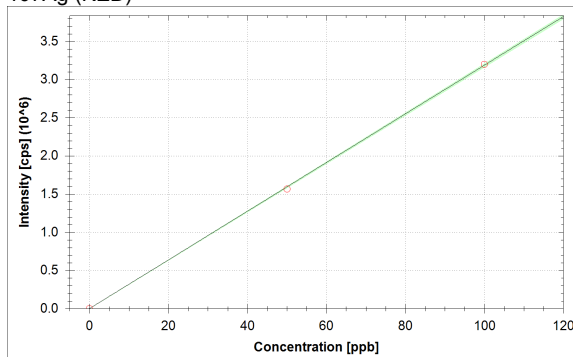
$$f(x) = 7312.8956x + 289.2868$$

$$R^2 = 0.9997$$

$$\text{BEC} = 0.040 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

107Ag (KED)



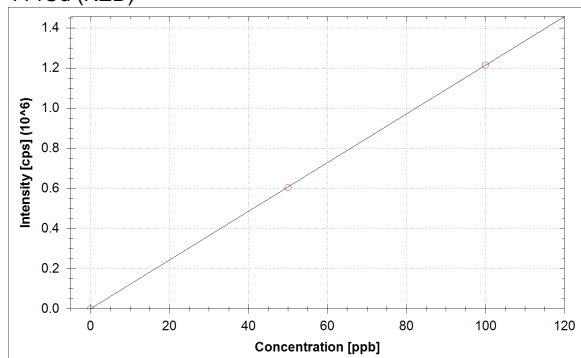
$$f(x) = 31880.4814x + 16.3320$$

$$R^2 = 0.9999$$

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

$$\text{LoD} = \text{N/A}$$

114Cd (KED)



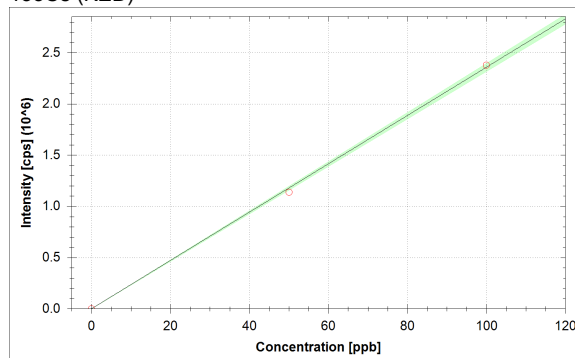
$$f(x) = 12134.2010 \cdot x + 35.9303$$

$$R^2 = 1.0000$$

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

$$\text{LoD} = \text{N/A}$$

133Cs (KED)



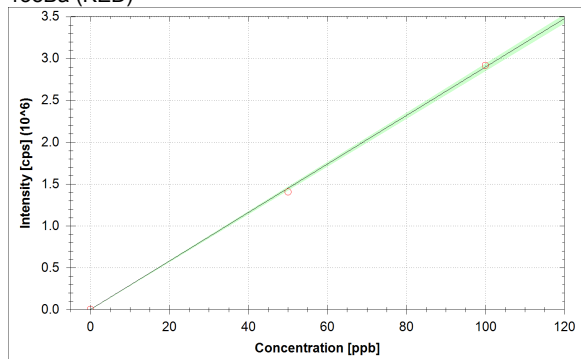
$$f(x) = 23576.0906 \cdot x + 42.4631$$

$$R^2 = 0.9994$$

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

$$\text{LoD} = \text{N/A}$$

138Ba (KED)



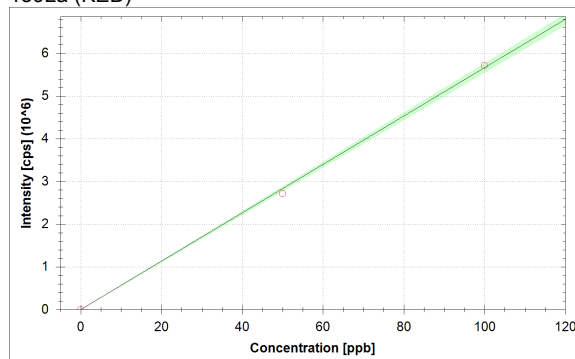
$$f(x) = 28957.7610 \cdot x + 1353.4668$$

$$R^2 = 0.9996$$

$$\text{BEC} = 0.047 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

139La (KED)



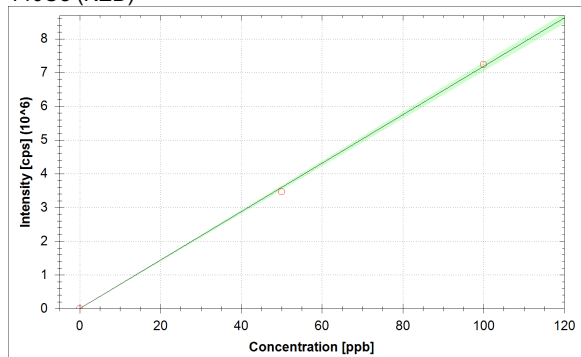
$$f(x) = 56624.0910 \cdot x + 203.1743$$

$$R^2 = 0.9993$$

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

$$\text{LoD} = \text{N/A}$$

140Ce (KED)



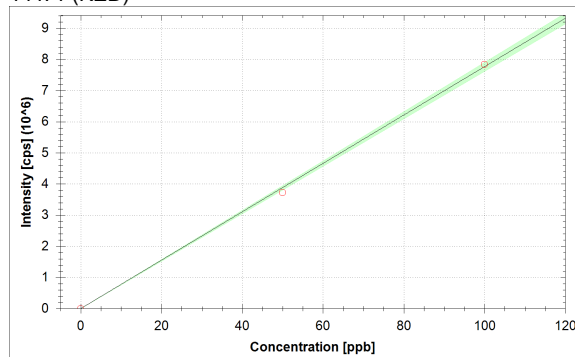
$$f(x) = 71819.3385 \cdot x + 629.1968$$

$$R^2 = 0.9994$$

$$\text{BEC} = 0.009 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

141Pr (KED)



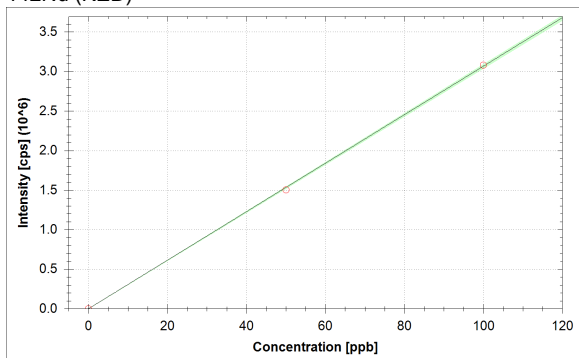
$$f(x) = 77660.1370 \cdot x + 68.8168$$

$$R^2 = 0.9993$$

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

$$\text{LoD} = \text{N/A}$$

142Nd (KED)



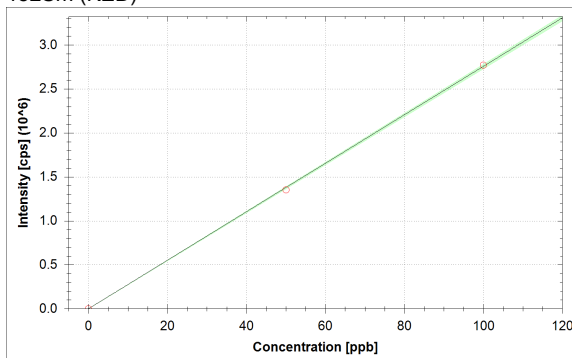
$$f(x) = 30666.1152 \cdot x + 140.9109$$

$$R^2 = 0.9998$$

$$\text{BEC} = 0.005 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

152Sm (KED)



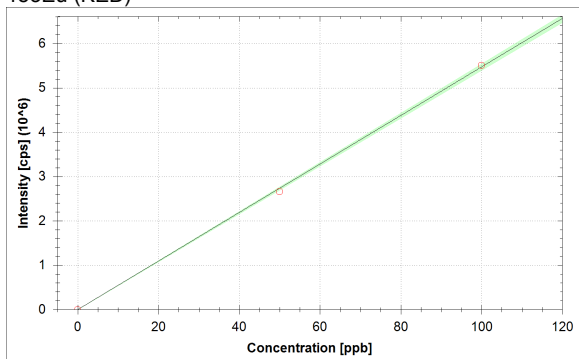
$$f(x) = 27564.6529 \cdot x + 26.2159$$

$$R^2 = 0.9998$$

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

$$\text{LoD} = \text{N/A}$$

153Eu (KED)



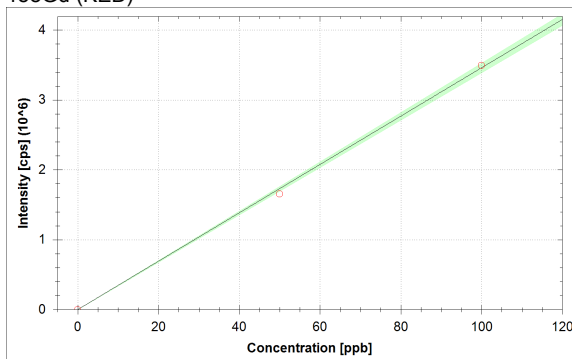
$$f(x) = 54695.6166 \cdot x + 29.4928$$

$$R^2 = 0.9996$$

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

$$\text{LoD} = \text{N/A}$$

158Gd (KED)



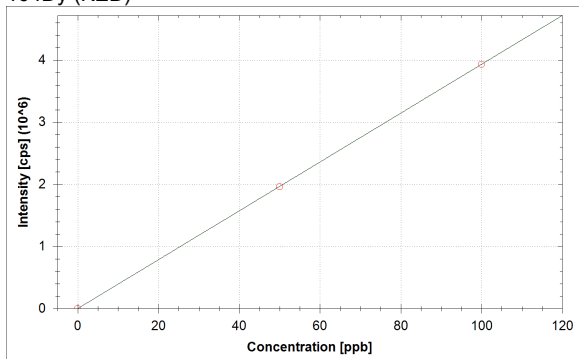
$$f(x) = 34593.8301 \cdot x + 36.0468$$

$$R^2 = 0.9992$$

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

$$\text{LoD} = \text{N/A}$$

164Dy (KED)



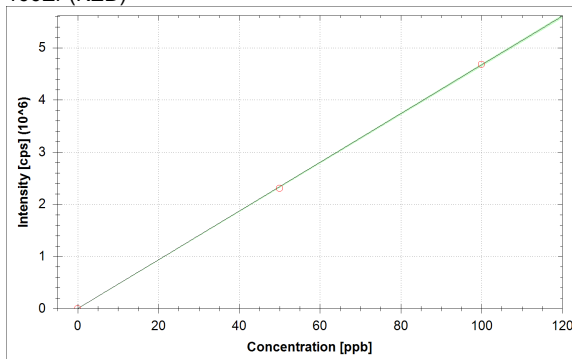
$$f(x) = 39320.9368 \cdot x + 19.6619$$

$$R^2 = 1.0000$$

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

$$\text{LoD} = \text{N/A}$$

166Er (KED)



$$f(x) = 46710.2638 \cdot x + 439.1230$$

$$R^2 = 0.9999$$

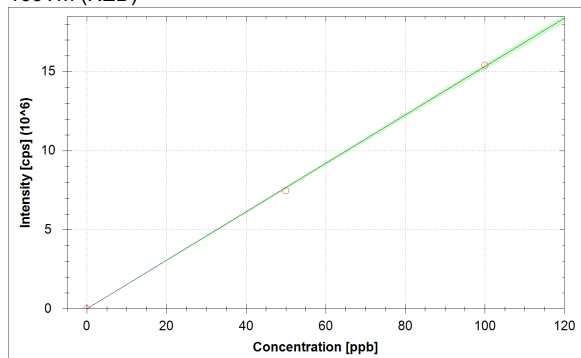
$$\text{BEC} = 0.009 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

# Comprehensive

10/9/2021 4:31:46 PM

**<sup>169</sup>Tm (KED)**



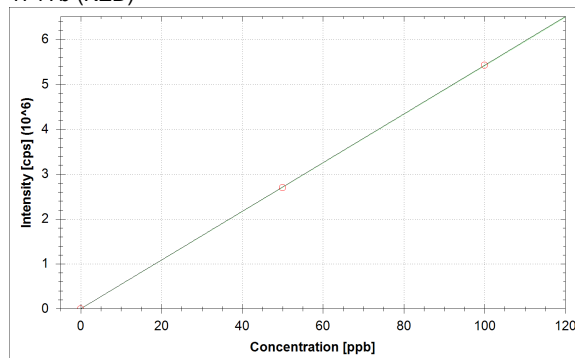
$$f(x) = 153091.6710 \cdot x + 68.8167$$

$$R^2 = 0.9997$$

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

$$\text{LoD} = \text{N/A}$$

**<sup>174</sup>Yb (KED)**



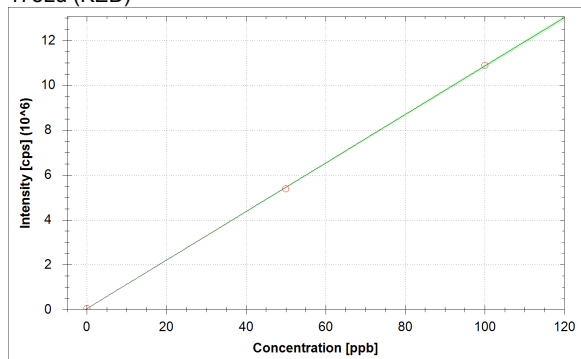
$$f(x) = 54226.0271 \cdot x + 39.3238$$

$$R^2 = 1.0000$$

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

$$\text{LoD} = \text{N/A}$$

**<sup>175</sup>Lu (KED)**



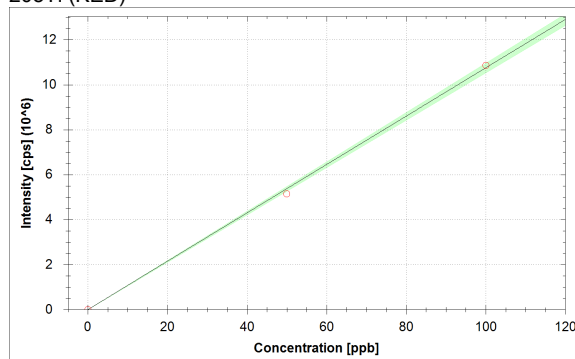
$$f(x) = 108120.7300 \cdot x + 42710.9742$$

$$R^2 = 0.9999$$

$$\text{BEC} = 0.395 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

**<sup>205</sup>Tl (KED)**



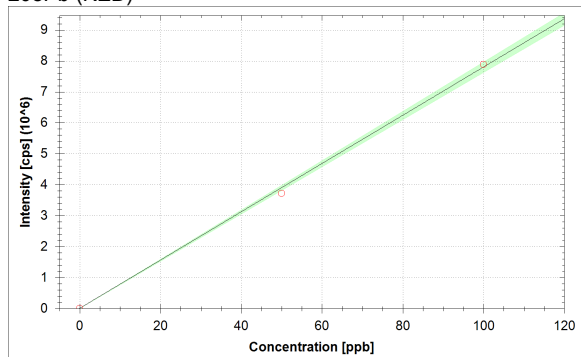
$$f(x) = 107493.6297 \cdot x + 40.3595$$

$$R^2 = 0.9992$$

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

$$\text{LoD} = \text{N/A}$$

**<sup>208</sup>Pb (KED)**



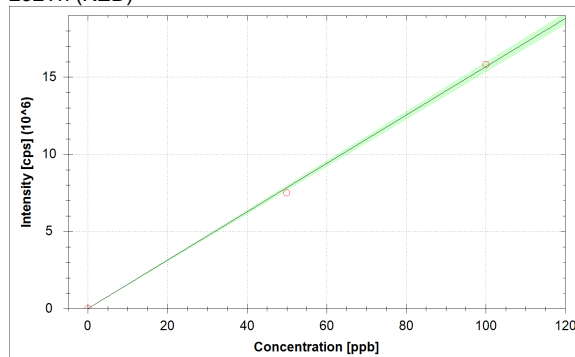
$$f(x) = 77922.1505 \cdot x + 8542.2836$$

$$R^2 = 0.9990$$

$$\text{BEC} = 0.110 \text{ ppb}$$

$$\text{LoD} = \text{N/A}$$

**<sup>232</sup>Th (KED)**



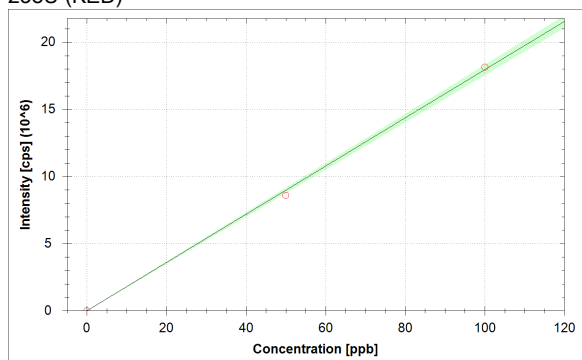
$$f(x) = 156668.1892 \cdot x + 349.7874$$

$$R^2 = 0.9992$$

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

$$\text{LoD} = \text{N/A}$$

238U (KED)



$$f(x) = 179503.9878 \cdot x + 208.5256$$

$$R^2 = 0.9992$$

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

$$\text{LoD} = \text{N/A}$$

# Comprehensive

10/9/2021 4:31:46 PM

## Standards:

Analysis Index: 3  
Analysis Name: 0+20  
Analysis Type: STD  
Analysis Started at: 10/9/2021 3:17:48 PM  
Standard (Stock): std0  
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
6Li (KED)	102.774 %		
9Be (KED)	0.000 ppb		0.000 ppb
11B (KED)	0.000 ppb		0.000 ppb
24Mg (KED)	0.000 ppb		0.000 ppb
27Al (KED)	0.000 ppb		0.000 ppb
45Sc (KED)	104.201 %		
51V (KED)	0.000 ppb		0.000 ppb
52Cr (KED)	0.000 ppb		0.000 ppb
55Mn (KED)	0.000 ppb		0.000 ppb
56Fe (KED)	0.000 ppb		0.000 ppb
58Ni (KED)	0.000 ppb		0.000 ppb
59Co (KED)	0.000 ppb		0.000 ppb
63Cu (KED)	0.000 ppb		0.000 ppb
64Zn (KED)	0.000 ppb		0.000 ppb
69Ga (KED)	0.000 ppb		0.000 ppb
75As (KED)	0.000 ppb		0.000 ppb
80Se (KED)	0.000 ppb		0.000 ppb
85Rb (KED)	0.000 ppb		0.000 ppb
88Sr (KED)	0.000 ppb		0.000 ppb
89Y (KED)	104.857 %		
107Ag (KED)	0.000 ppb		0.000 ppb
114Cd (KED)	0.000 ppb		0.000 ppb
115In (KED)	102.050 %		
133Cs (KED)	0.000 ppb		0.000 ppb
138Ba (KED)	0.000 ppb		0.000 ppb
139La (KED)	0.000 ppb		0.000 ppb
140Ce (KED)	0.000 ppb		0.000 ppb
141Pr (KED)	0.000 ppb		0.000 ppb
142Nd (KED)	0.000 ppb		0.000 ppb
152Sm (KED)	0.000 ppb		0.000 ppb
153Eu (KED)	0.000 ppb		0.000 ppb
158Gd (KED)	0.000 ppb		0.000 ppb
159Tb (KED)	101.720 %		
164Dy (KED)	0.000 ppb		0.000 ppb
166Er (KED)	0.000 ppb		0.000 ppb
169Tm (KED)	0.000 ppb		0.000 ppb
174Yb (KED)	0.000 ppb		0.000 ppb
175Lu (KED)	0.000 ppb		0.000 ppb
205Tl (KED)	0.000 ppb		0.000 ppb
208Pb (KED)	0.000 ppb		0.000 ppb
209Bi (KED)	99.109 %		
232Th (KED)	0.000 ppb		0.000 ppb
238U (KED)	0.000 ppb		0.000 ppb

# Comprehensive

10/9/2021 4:31:46 PM

## Standards:

Analysis Index: 4  
Analysis Name: 50+20  
Analysis Type: STD  
Analysis Started at: 10/9/2021 3:20:17 PM  
Standard (Stock): std1  
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
6Li (KED)	103.082 %		
9Be (KED)	45.582 ppb		50.000 ppb
11B (KED)	62.993 ppb		50.000 ppb
24Mg (KED)	44.659 ppb		50.000 ppb
27Al (KED)	49.318 ppb		50.000 ppb
45Sc (KED)	109.224 %		
51V (KED)	48.966 ppb		50.000 ppb
52Cr (KED)	49.135 ppb		50.000 ppb
55Mn (KED)	49.171 ppb		50.000 ppb
56Fe (KED)	48.898 ppb		50.000 ppb
58Ni (KED)	49.738 ppb		50.000 ppb
59Co (KED)	48.893 ppb		50.000 ppb
63Cu (KED)	49.526 ppb		50.000 ppb
64Zn (KED)	49.452 ppb		50.000 ppb
69Ga (KED)	49.000 ppb		50.000 ppb
75As (KED)	49.235 ppb		50.000 ppb
80Se (KED)	49.390 ppb		50.000 ppb
85Rb (KED)	48.920 ppb		50.000 ppb
88Sr (KED)	48.754 ppb		50.000 ppb
89Y (KED)	107.211 %		
107Ag (KED)	49.197 ppb		50.000 ppb
114Cd (KED)	49.821 ppb		50.000 ppb
115In (KED)	105.439 %		
133Cs (KED)	48.205 ppb		50.000 ppb
138Ba (KED)	48.449 ppb		50.000 ppb
139La (KED)	47.987 ppb		50.000 ppb
140Ce (KED)	48.218 ppb		50.000 ppb
141Pr (KED)	48.004 ppb		50.000 ppb
142Nd (KED)	49.076 ppb		50.000 ppb
152Sm (KED)	48.959 ppb		50.000 ppb
153Eu (KED)	48.571 ppb		50.000 ppb
158Gd (KED)	47.879 ppb		50.000 ppb
159Tb (KED)	107.396 %		
164Dy (KED)	49.966 ppb		50.000 ppb
166Er (KED)	49.454 ppb		50.000 ppb
169Tm (KED)	48.730 ppb		50.000 ppb
174Yb (KED)	49.769 ppb		50.000 ppb
175Lu (KED)	49.308 ppb		50.000 ppb
205Tl (KED)	47.859 ppb		50.000 ppb
208Pb (KED)	47.695 ppb		50.000 ppb
209Bi (KED)	106.309 %		
232Th (KED)	47.901 ppb		50.000 ppb
238U (KED)	47.825 ppb		50.000 ppb

# Comprehensive

10/9/2021 4:31:46 PM

## Standards:

Analysis Index: 5  
Analysis Name: 100+20  
Analysis Type: STD  
Analysis Started at: 10/9/2021 3:23:07 PM  
Standard (Stock): std2  
Standard DF: 1

Category	Concentration average	Concentration RSD	Standard Concentration
6Li (KED)	98.459 %		
9Be (KED)	102.209 ppb		100.000 ppb
11B (KED)	93.503 ppb		100.000 ppb
24Mg (KED)	102.670 ppb		100.000 ppb
27Al (KED)	100.341 ppb		100.000 ppb
45Sc (KED)	112.854 %		
51V (KED)	100.517 ppb		100.000 ppb
52Cr (KED)	100.433 ppb		100.000 ppb
55Mn (KED)	100.415 ppb		100.000 ppb
56Fe (KED)	100.551 ppb		100.000 ppb
58Ni (KED)	100.131 ppb		100.000 ppb
59Co (KED)	100.554 ppb		100.000 ppb
63Cu (KED)	100.237 ppb		100.000 ppb
64Zn (KED)	100.274 ppb		100.000 ppb
69Ga (KED)	100.500 ppb		100.000 ppb
75As (KED)	100.383 ppb		100.000 ppb
80Se (KED)	100.305 ppb		100.000 ppb
85Rb (KED)	100.540 ppb		100.000 ppb
88Sr (KED)	100.623 ppb		100.000 ppb
89Y (KED)	110.863 %		
107Ag (KED)	100.402 ppb		100.000 ppb
114Cd (KED)	100.090 ppb		100.000 ppb
115In (KED)	108.963 %		
133Cs (KED)	100.898 ppb		100.000 ppb
138Ba (KED)	100.776 ppb		100.000 ppb
139La (KED)	101.007 ppb		100.000 ppb
140Ce (KED)	100.891 ppb		100.000 ppb
141Pr (KED)	100.998 ppb		100.000 ppb
142Nd (KED)	100.462 ppb		100.000 ppb
152Sm (KED)	100.521 ppb		100.000 ppb
153Eu (KED)	100.715 ppb		100.000 ppb
158Gd (KED)	101.060 ppb		100.000 ppb
159Tb (KED)	111.219 %		
164Dy (KED)	100.017 ppb		100.000 ppb
166Er (KED)	100.273 ppb		100.000 ppb
169Tm (KED)	100.635 ppb		100.000 ppb
174Yb (KED)	100.116 ppb		100.000 ppb
175Lu (KED)	100.346 ppb		100.000 ppb
205Tl (KED)	101.071 ppb		100.000 ppb
208Pb (KED)	101.152 ppb		100.000 ppb
209Bi (KED)	107.531 %		
232Th (KED)	101.050 ppb		100.000 ppb
238U (KED)	101.088 ppb		100.000 ppb

# Comprehensive

10/9/2021 4:31:46 PM

## Sample List Summary:

Instrument ID: iCAP Q

Index:	Label:	Main Runs:	Survey Runs:	Start Time:	User name:
1	water	1	0	10/9/2021 3:14:00 PM	WINDOWS-UPCI4ER\Administrator
2	blk	1	0	10/9/2021 3:15:41 PM	WINDOWS-UPCI4ER\Administrator
3	0+20	1	0	10/9/2021 3:17:48 PM	WINDOWS-UPCI4ER\Administrator
4	50+20	1	0	10/9/2021 3:20:17 PM	WINDOWS-UPCI4ER\Administrator
5	100+20	1	0	10/9/2021 3:23:07 PM	WINDOWS-UPCI4ER\Administrator
6	11ti	1	0	10/9/2021 3:25:42 PM	WINDOWS-UPCI4ER\Administrator
7	2ti	1	0	10/9/2021 3:28:26 PM	WINDOWS-UPCI4ER\Administrator
8	w19ti	1	0	10/9/2021 3:31:18 PM	WINDOWS-UPCI4ER\Administrator
9	7ti	1	0	10/9/2021 3:34:03 PM	WINDOWS-UPCI4ER\Administrator
10	12ti	1	0	10/9/2021 3:36:38 PM	WINDOWS-UPCI4ER\Administrator
11	20ti	1	0	10/9/2021 3:39:27 PM	WINDOWS-UPCI4ER\Administrator
12	4-2ti	1	0	10/9/2021 3:42:00 PM	WINDOWS-UPCI4ER\Administrator
13	00077ti	1	0	10/9/2021 3:44:59 PM	WINDOWS-UPCI4ER\Administrator
14	0299ti	1	0	10/9/2021 3:48:29 PM	WINDOWS-UPCI4ER\Administrator
15	5ti	1	0	10/9/2021 3:51:35 PM	WINDOWS-UPCI4ER\Administrator
16	23ti	1	0	10/9/2021 3:54:38 PM	WINDOWS-UPCI4ER\Administrator
17	00061ti	1	0	10/9/2021 3:57:44 PM	WINDOWS-UPCI4ER\Administrator
18	00099ti	1	0	10/9/2021 4:00:25 PM	WINDOWS-UPCI4ER\Administrator
19	00074ti	1	0	10/9/2021 4:03:10 PM	WINDOWS-UPCI4ER\Administrator
20	00078ti	1	0	10/9/2021 4:06:06 PM	WINDOWS-UPCI4ER\Administrator
21	25ti	1	0	10/9/2021 4:08:57 PM	WINDOWS-UPCI4ER\Administrator
22	22-12ti	1	0	10/9/2021 4:11:30 PM	WINDOWS-UPCI4ER\Administrator
23	7ti	1	0	10/9/2021 4:14:06 PM	WINDOWS-UPCI4ER\Administrator
24	6ti	1	0	10/9/2021 4:16:35 PM	WINDOWS-UPCI4ER\Administrator
25	19ti	1	0	10/9/2021 4:19:06 PM	WINDOWS-UPCI4ER\Administrator
26	00090ti	1	0	10/9/2021 4:21:40 PM	WINDOWS-UPCI4ER\Administrator
27	00070ti	1	0	10/9/2021 4:24:01 PM	WINDOWS-UPCI4ER\Administrator
28	00098ti	1	0	10/9/2021 4:26:30 PM	WINDOWS-UPCI4ER\Administrator
29	5ti	1	0	10/9/2021 4:28:53 PM	WINDOWS-UPCI4ER\Administrator

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 1

Analysis name: water

Analysis started at: 10/9/2021 3:14:00 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	0.154 %	
9Be (KED)	0.000 ppb	
11B (KED)	501.388 ppb	
24Mg (KED)	196.146 ppb	
27Al (KED)	31.624 ppb	
45Sc (KED)	0.168 %	
51V (KED)	-0.001 ppb	
52Cr (KED)	96.191 ppb	
55Mn (KED)	9.175 ppb	
56Fe (KED)	23.943 ppb	
58Ni (KED)	12.802 ppb	
59Co (KED)	0.239 ppb	
63Cu (KED)	Infinity ppb	
64Zn (KED)	Infinity ppb	
69Ga (KED)	Infinity ppb	
75As (KED)	Infinity ppb	
80Se (KED)	Infinity ppb	
85Rb (KED)	Infinity ppb	
88Sr (KED)	Infinity ppb	
89Y (KED)	0.000 %	
107Ag (KED)	141.923 ppb	
114Cd (KED)	62.144 ppb	
115In (KED)	0.000 %	
133Cs (KED)	31.984 ppb	
138Ba (KED)	Infinity ppb	
139La (KED)	Infinity ppb	
140Ce (KED)	Infinity ppb	
141Pr (KED)	Infinity ppb	
158Gd (KED)	Infinity ppb	
159Tb (KED)	0.000 %	
205Tl (KED)	55.614 ppb	
208Pb (KED)	593.203 ppb	
209Bi (KED)	0.001 %	
232Th (KED)	-0.002 ppb	
238U (KED)	11.100 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	0.154 %	3 cps	
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	501.388 ppb	43 cps	
24Mg (KED)	196.146 ppb	123 cps	
27Al (KED)	31.624 ppb	7 cps	
45Sc (KED)	0.168 %	77 cps	
51V (KED)	-0.001 ppb	0 cps	
52Cr (KED)	96.191 ppb	1,414 cps	
55Mn (KED)	9.175 ppb	77 cps	
56Fe (KED)	23.943 ppb	343 cps	
58Ni (KED)	12.802 ppb	210 cps	
59Co (KED)	0.239 ppb	7 cps	
63Cu (KED)	Infinity ppb	223 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
64Zn (KED)	Infinity ppb	573 cps	
69Ga (KED)	Infinity ppb	10 cps	
75As (KED)	Infinity ppb	13 cps	
80Se (KED)	Infinity ppb	1,930 cps	
85Rb (KED)	Infinity ppb	17 cps	
88Sr (KED)	Infinity ppb	70 cps	
89Y (KED)	0.000 %	0 cps	
107Ag (KED)	141.923 ppb	20 cps	
114Cd (KED)	62.144 ppb	3 cps	
115In (KED)	0.000 %	3 cps	
133Cs (KED)	31.984 ppb	3 cps	
138Ba (KED)	Infinity ppb	350 cps	
139La (KED)	Infinity ppb	3 cps	
140Ce (KED)	Infinity ppb	7 cps	
141Pr (KED)	Infinity ppb	7 cps	
142Nd (KED)		0 cps	
152Sm (KED)		0 cps	
153Eu (KED)		0 cps	
158Gd (KED)	Infinity ppb	3 cps	
159Tb (KED)	0.000 %	0 cps	
164Dy (KED)		0 cps	
166Er (KED)		0 cps	
169Tm (KED)		0 cps	
174Yb (KED)		0 cps	
175Lu (KED)		0 cps	
205Tl (KED)	55.614 ppb	50 cps	
208Pb (KED)	593.203 ppb	387 cps	
209Bi (KED)	0.001 %	23 cps	
232Th (KED)	-0.002 ppb	0 cps	
238U (KED)	11.100 ppb	17 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 2

Analysis name: blk

Analysis started at: 10/9/2021 3:15:41 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	100.000 %	
9Be (KED)	0.000 ppb	
11B (KED)	1.846 ppb	
24Mg (KED)	0.078 ppb	
27Al (KED)	0.443 ppb	
45Sc (KED)	100.000 %	
51V (KED)	0.002 ppb	
52Cr (KED)	-0.002 ppb	
55Mn (KED)	0.001 ppb	
56Fe (KED)	-0.296 ppb	
58Ni (KED)	-0.001 ppb	
59Co (KED)	0.001 ppb	
63Cu (KED)	0.023 ppb	
64Zn (KED)	0.072 ppb	
69Ga (KED)	-0.003 ppb	
75As (KED)	-0.009 ppb	
80Se (KED)	0.428 ppb	
85Rb (KED)	-0.002 ppb	
88Sr (KED)	0.002 ppb	
89Y (KED)	100.000 %	
107Ag (KED)	0.001 ppb	
114Cd (KED)	0.000 ppb	
115In (KED)	100.000 %	
133Cs (KED)	-0.001 ppb	
138Ba (KED)	-0.005 ppb	
139La (KED)	0.001 ppb	
140Ce (KED)	-0.001 ppb	
141Pr (KED)	0.001 ppb	
142Nd (KED)	0.001 ppb	
152Sm (KED)	0.000 ppb	
153Eu (KED)	0.000 ppb	
158Gd (KED)	0.000 ppb	
159Tb (KED)	100.000 %	
164Dy (KED)	0.000 ppb	
166Er (KED)	0.000 ppb	
169Tm (KED)	0.000 ppb	
174Yb (KED)	0.000 ppb	
175Lu (KED)	0.041 ppb	
205Tl (KED)	0.000 ppb	
208Pb (KED)	0.009 ppb	
209Bi (KED)	100.000 %	
232Th (KED)	0.000 ppb	
238U (KED)	0.001 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	100.000 %	2,164 cps	
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	1.846 ppb	1,273 cps	
24Mg (KED)	0.078 ppb	563 cps	
27Al (KED)	0.443 ppb	213 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	100.000 %	45,637 cps	
51V (KED)	0.002 ppb	17 cps	
52Cr (KED)	-0.002 ppb	187 cps	
55Mn (KED)	0.001 ppb	123 cps	
56Fe (KED)	-0.296 ppb	5,728 cps	
58Ni (KED)	-0.001 ppb	523 cps	
59Co (KED)	0.001 ppb	63 cps	
63Cu (KED)	0.023 ppb	1,097 cps	
64Zn (KED)	0.072 ppb	2,027 cps	
69Ga (KED)	-0.003 ppb	53 cps	
75As (KED)	-0.009 ppb	3 cps	
80Se (KED)	0.428 ppb	1,873 cps	
85Rb (KED)	-0.002 ppb	10 cps	
88Sr (KED)	0.002 ppb	303 cps	
89Y (KED)	100.000 %	419,196 cps	
107Ag (KED)	0.001 ppb	33 cps	
114Cd (KED)	0.000 ppb	30 cps	
115In (KED)	100.000 %	754,100 cps	
133Cs (KED)	-0.001 ppb	20 cps	
138Ba (KED)	-0.005 ppb	1,217 cps	
139La (KED)	0.001 ppb	240 cps	
140Ce (KED)	-0.001 ppb	570 cps	
141Pr (KED)	0.001 ppb	133 cps	
142Nd (KED)	0.001 ppb	167 cps	
152Sm (KED)	0.000 ppb	23 cps	
153Eu (KED)	0.000 ppb	27 cps	
158Gd (KED)	0.000 ppb	40 cps	
159Tb (KED)	100.000 %	3,183,036 cps	
164Dy (KED)	0.000 ppb	23 cps	
166Er (KED)	0.000 ppb	447 cps	
169Tm (KED)	0.000 ppb	97 cps	
174Yb (KED)	0.000 ppb	30 cps	
175Lu (KED)	0.041 ppb	47,162 cps	
205Tl (KED)	0.000 ppb	17 cps	
208Pb (KED)	0.009 ppb	9,230 cps	
209Bi (KED)	100.000 %	2,789,833 cps	
232Th (KED)	0.000 ppb	310 cps	
238U (KED)	0.001 ppb	333 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 3

Analysis name: 0+20

Analysis started at: 10/9/2021 3:17:48 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	102.774 %	
9Be (KED)	0.000 ppb	
11B (KED)	0.000 ppb	
24Mg (KED)	0.000 ppb	
27Al (KED)	0.000 ppb	
45Sc (KED)	104.201 %	
51V (KED)	0.000 ppb	
52Cr (KED)	0.000 ppb	
55Mn (KED)	0.000 ppb	
56Fe (KED)	0.000 ppb	
58Ni (KED)	0.000 ppb	
59Co (KED)	0.000 ppb	
63Cu (KED)	0.000 ppb	
64Zn (KED)	0.000 ppb	
69Ga (KED)	0.000 ppb	
75As (KED)	0.000 ppb	
80Se (KED)	0.000 ppb	
85Rb (KED)	0.000 ppb	
88Sr (KED)	0.000 ppb	
89Y (KED)	104.857 %	
107Ag (KED)	0.000 ppb	
114Cd (KED)	0.000 ppb	
115In (KED)	102.050 %	
133Cs (KED)	0.000 ppb	
138Ba (KED)	0.000 ppb	
139La (KED)	0.000 ppb	
140Ce (KED)	0.000 ppb	
141Pr (KED)	0.000 ppb	
142Nd (KED)	0.000 ppb	
152Sm (KED)	0.000 ppb	
153Eu (KED)	0.000 ppb	
158Gd (KED)	0.000 ppb	
159Tb (KED)	101.720 %	
164Dy (KED)	0.000 ppb	
166Er (KED)	0.000 ppb	
169Tm (KED)	0.000 ppb	
174Yb (KED)	0.000 ppb	
175Lu (KED)	0.000 ppb	
205Tl (KED)	0.000 ppb	
208Pb (KED)	0.000 ppb	
209Bi (KED)	99.109 %	
232Th (KED)	0.000 ppb	
238U (KED)	0.000 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	102.774 %	2,224 cps	
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	0.000 ppb	1,207 cps	
24Mg (KED)	0.000 ppb	547 cps	
27Al (KED)	0.000 ppb	167 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	104.201 %	47,554 cps	
51V (KED)	0.000 ppb	7 cps	
52Cr (KED)	0.000 ppb	217 cps	
55Mn (KED)	0.000 ppb	123 cps	
56Fe (KED)	0.000 ppb	8,499 cps	
58Ni (KED)	0.000 ppb	560 cps	
59Co (KED)	0.000 ppb	43 cps	
63Cu (KED)	0.000 ppb	860 cps	
64Zn (KED)	0.000 ppb	1,877 cps	
69Ga (KED)	0.000 ppb	73 cps	
75As (KED)	0.000 ppb	13 cps	
80Se (KED)	0.000 ppb	1,810 cps	
85Rb (KED)	0.000 ppb	23 cps	
88Sr (KED)	0.000 ppb	303 cps	
89Y (KED)	104.857 %	439,555 cps	
107Ag (KED)	0.000 ppb	17 cps	
114Cd (KED)	0.000 ppb	37 cps	
115In (KED)	102.050 %	769,556 cps	
133Cs (KED)	0.000 ppb	43 cps	
138Ba (KED)	0.000 ppb	1,377 cps	
139La (KED)	0.000 ppb	207 cps	
140Ce (KED)	0.000 ppb	640 cps	
141Pr (KED)	0.000 ppb	70 cps	
142Nd (KED)	0.000 ppb	143 cps	
152Sm (KED)	0.000 ppb	27 cps	
153Eu (KED)	0.000 ppb	30 cps	
158Gd (KED)	0.000 ppb	37 cps	
159Tb (KED)	101.720 %	3,237,779 cps	
164Dy (KED)	0.000 ppb	20 cps	
166Er (KED)	0.000 ppb	447 cps	
169Tm (KED)	0.000 ppb	70 cps	
174Yb (KED)	0.000 ppb	40 cps	
175Lu (KED)	0.000 ppb	43,446 cps	
205Tl (KED)	0.000 ppb	40 cps	
208Pb (KED)	0.000 ppb	8,466 cps	
209Bi (KED)	99.109 %	2,764,987 cps	
232Th (KED)	0.000 ppb	347 cps	
238U (KED)	0.000 ppb	207 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 4

Analysis name: 50+20

Analysis started at: 10/9/2021 3:20:17 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	103.082 %	
9Be (KED)	45.582 ppb	
11B (KED)	62.993 ppb	
24Mg (KED)	44.659 ppb	
27Al (KED)	49.318 ppb	
45Sc (KED)	109.224 %	
51V (KED)	48.966 ppb	
52Cr (KED)	49.135 ppb	
55Mn (KED)	49.171 ppb	
56Fe (KED)	48.898 ppb	
58Ni (KED)	49.738 ppb	
59Co (KED)	48.893 ppb	
63Cu (KED)	49.526 ppb	
64Zn (KED)	49.452 ppb	
69Ga (KED)	49.000 ppb	
75As (KED)	49.235 ppb	
80Se (KED)	49.390 ppb	
85Rb (KED)	48.920 ppb	
88Sr (KED)	48.754 ppb	
89Y (KED)	107.211 %	
107Ag (KED)	49.197 ppb	
114Cd (KED)	49.821 ppb	
115In (KED)	105.439 %	
133Cs (KED)	48.205 ppb	
138Ba (KED)	48.449 ppb	
139La (KED)	47.987 ppb	
140Ce (KED)	48.218 ppb	
141Pr (KED)	48.004 ppb	
142Nd (KED)	49.076 ppb	
152Sm (KED)	48.959 ppb	
153Eu (KED)	48.571 ppb	
158Gd (KED)	47.879 ppb	
159Tb (KED)	107.396 %	
164Dy (KED)	49.966 ppb	
166Er (KED)	49.454 ppb	
169Tm (KED)	48.730 ppb	
174Yb (KED)	49.769 ppb	
175Lu (KED)	49.308 ppb	
205Tl (KED)	47.859 ppb	
208Pb (KED)	47.695 ppb	
209Bi (KED)	106.309 %	
232Th (KED)	47.901 ppb	
238U (KED)	47.825 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	103.082 %	2,230 cps	
9Be (KED)	45.582 ppb	4,554 cps	
11B (KED)	62.993 ppb	4,701 cps	
24Mg (KED)	44.659 ppb	19,211 cps	
27Al (KED)	49.318 ppb	6,662 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	109.224 %	49,846 cps	
51V (KED)	48.966 ppb	315,324 cps	
52Cr (KED)	49.135 ppb	469,746 cps	
55Mn (KED)	49.171 ppb	266,567 cps	
56Fe (KED)	48.898 ppb	446,597 cps	
58Ni (KED)	49.738 ppb	528,784 cps	
59Co (KED)	48.893 ppb	876,333 cps	
63Cu (KED)	49.526 ppb	639,490 cps	
64Zn (KED)	49.452 ppb	176,154 cps	
69Ga (KED)	49.000 ppb	264,420 cps	
75As (KED)	49.235 ppb	56,253 cps	
80Se (KED)	49.390 ppb	20,043 cps	
85Rb (KED)	48.920 ppb	259,561 cps	
88Sr (KED)	48.754 ppb	382,553 cps	
89Y (KED)	107.211 %	449,425 cps	
107Ag (KED)	49.197 ppb	1,653,737 cps	
114Cd (KED)	49.821 ppb	637,454 cps	
115In (KED)	105.439 %	795,116 cps	
133Cs (KED)	48.205 ppb	1,198,335 cps	
138Ba (KED)	48.449 ppb	1,508,179 cps	
139La (KED)	47.987 ppb	2,918,383 cps	
140Ce (KED)	48.218 ppb	3,719,815 cps	
141Pr (KED)	48.004 ppb	4,003,827 cps	
142Nd (KED)	49.076 ppb	1,616,434 cps	
152Sm (KED)	48.959 ppb	1,449,376 cps	
153Eu (KED)	48.571 ppb	2,853,110 cps	
158Gd (KED)	47.879 ppb	1,778,858 cps	
159Tb (KED)	107.396 %	3,418,451 cps	
164Dy (KED)	49.966 ppb	2,110,037 cps	
166Er (KED)	49.454 ppb	2,481,348 cps	
169Tm (KED)	48.730 ppb	8,012,039 cps	
174Yb (KED)	49.769 ppb	2,898,409 cps	
175Lu (KED)	49.308 ppb	5,771,397 cps	
205Tl (KED)	47.859 ppb	5,469,080 cps	
208Pb (KED)	47.695 ppb	3,960,058 cps	
209Bi (KED)	106.309 %	2,965,830 cps	
232Th (KED)	47.901 ppb	7,978,282 cps	
238U (KED)	47.825 ppb	9,126,513 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 5

Analysis name: 100+20

Analysis started at: 10/9/2021 3:23:07 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	98.459 %	
9Be (KED)	102.209 ppb	
11B (KED)	93.503 ppb	
24Mg (KED)	102.670 ppb	
27Al (KED)	100.341 ppb	
45Sc (KED)	112.854 %	
51V (KED)	100.517 ppb	
52Cr (KED)	100.433 ppb	
55Mn (KED)	100.415 ppb	
56Fe (KED)	100.551 ppb	
58Ni (KED)	100.131 ppb	
59Co (KED)	100.554 ppb	
63Cu (KED)	100.237 ppb	
64Zn (KED)	100.274 ppb	
69Ga (KED)	100.500 ppb	
75As (KED)	100.383 ppb	
80Se (KED)	100.305 ppb	
85Rb (KED)	100.540 ppb	
88Sr (KED)	100.623 ppb	
89Y (KED)	110.863 %	
107Ag (KED)	100.402 ppb	
114Cd (KED)	100.090 ppb	
115In (KED)	108.963 %	
133Cs (KED)	100.898 ppb	
138Ba (KED)	100.776 ppb	
139La (KED)	101.007 ppb	
140Ce (KED)	100.891 ppb	
141Pr (KED)	100.998 ppb	
142Nd (KED)	100.462 ppb	
152Sm (KED)	100.521 ppb	
153Eu (KED)	100.715 ppb	
158Gd (KED)	101.060 ppb	
159Tb (KED)	111.219 %	
164Dy (KED)	100.017 ppb	
166Er (KED)	100.273 ppb	
169Tm (KED)	100.635 ppb	
174Yb (KED)	100.116 ppb	
175Lu (KED)	100.346 ppb	
205Tl (KED)	101.071 ppb	
208Pb (KED)	101.152 ppb	
209Bi (KED)	107.531 %	
232Th (KED)	101.050 ppb	
238U (KED)	101.088 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	98.459 %	2,130 cps	
9Be (KED)	102.209 ppb	9,754 cps	
11B (KED)	93.503 ppb	6,105 cps	
24Mg (KED)	102.670 ppb	41,506 cps	
27Al (KED)	100.341 ppb	13,818 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	112.854 %	51,503 cps	
51V (KED)	100.517 ppb	668,804 cps	
52Cr (KED)	100.433 ppb	991,847 cps	
55Mn (KED)	100.415 ppb	562,327 cps	
56Fe (KED)	100.551 ppb	939,158 cps	
58Ni (KED)	100.131 ppb	1,099,294 cps	
59Co (KED)	100.554 ppb	1,862,138 cps	
63Cu (KED)	100.237 ppb	1,337,439 cps	
64Zn (KED)	100.274 ppb	367,313 cps	
69Ga (KED)	100.500 ppb	560,722 cps	
75As (KED)	100.383 ppb	118,584 cps	
80Se (KED)	100.305 ppb	40,118 cps	
85Rb (KED)	100.540 ppb	551,584 cps	
88Sr (KED)	100.623 ppb	816,101 cps	
89Y (KED)	110.863 %	464,732 cps	
107Ag (KED)	100.402 ppb	3,487,771 cps	
114Cd (KED)	100.090 ppb	1,323,406 cps	
115In (KED)	108.963 %	821,691 cps	
133Cs (KED)	100.898 ppb	2,592,034 cps	
138Ba (KED)	100.776 ppb	3,247,147 cps	
139La (KED)	101.007 ppb	6,361,310 cps	
140Ce (KED)	100.891 ppb	8,059,543 cps	
141Pr (KED)	100.998 ppb	8,723,558 cps	
142Nd (KED)	100.462 ppb	3,426,573 cps	
152Sm (KED)	100.521 ppb	3,081,706 cps	
153Eu (KED)	100.715 ppb	6,126,714 cps	
158Gd (KED)	101.060 ppb	3,888,341 cps	
159Tb (KED)	111.219 %	3,540,149 cps	
164Dy (KED)	100.017 ppb	4,374,011 cps	
166Er (KED)	100.273 ppb	5,209,740 cps	
169Tm (KED)	100.635 ppb	17,134,902 cps	
174Yb (KED)	100.116 ppb	6,037,990 cps	
175Lu (KED)	100.346 ppb	12,114,204 cps	
205Tl (KED)	101.071 ppb	11,682,666 cps	
208Pb (KED)	101.152 ppb	8,484,763 cps	
209Bi (KED)	107.531 %	2,999,926 cps	
232Th (KED)	101.050 ppb	17,023,857 cps	
238U (KED)	101.088 ppb	19,512,350 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 6

Analysis name: 11ti

Analysis started at: 10/9/2021 3:25:42 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	115.410 %	
9Be (KED)	0.060 ppb	
11B (KED)	-12.494 ppb	
24Mg (KED)	462.221 ppb	
27Al (KED)	418.671 ppb	
45Sc (KED)	116.507 %	
51V (KED)	0.899 ppb	
52Cr (KED)	12.217 ppb	
55Mn (KED)	17.081 ppb	
56Fe (KED)	524.764 ppb	
58Ni (KED)	4.139 ppb	
59Co (KED)	0.679 ppb	
63Cu (KED)	14.366 ppb	
64Zn (KED)	241.961 ppb	
69Ga (KED)	2.122 ppb	
75As (KED)	1.233 ppb	
80Se (KED)	0.520 ppb	
85Rb (KED)	3.629 ppb	
88Sr (KED)	8.841 ppb	
89Y (KED)	118.134 %	
107Ag (KED)	0.052 ppb	
114Cd (KED)	0.077 ppb	
115In (KED)	114.036 %	
133Cs (KED)	0.079 ppb	
138Ba (KED)	9.486 ppb	
139La (KED)	0.560 ppb	
140Ce (KED)	1.124 ppb	
141Pr (KED)	0.135 ppb	
142Nd (KED)	0.731 ppb	
152Sm (KED)	0.102 ppb	
153Eu (KED)	0.020 ppb	
158Gd (KED)	0.089 ppb	
159Tb (KED)	124.333 %	
164Dy (KED)	0.063 ppb	
166Er (KED)	0.032 ppb	
169Tm (KED)	0.005 ppb	
174Yb (KED)	0.024 ppb	
175Lu (KED)	-0.118 ppb	
205Tl (KED)	0.013 ppb	
208Pb (KED)	3.441 ppb	
209Bi (KED)	113.901 %	
232Th (KED)	0.191 ppb	
238U (KED)	0.057 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	115.410 %	2,497 cps	
9Be (KED)	0.060 ppb	7 cps	
11B (KED)	-12.494 ppb	580 cps	
24Mg (KED)	462.221 ppb	216,877 cps	
27Al (KED)	418.671 ppb	58,929 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	116.507 %	53,170 cps	
51V (KED)	0.899 ppb	6,182 cps	
52Cr (KED)	12.217 ppb	124,771 cps	
55Mn (KED)	17.081 ppb	98,864 cps	
56Fe (KED)	524.764 ppb	5,019,916 cps	
58Ni (KED)	4.139 ppb	47,507 cps	
59Co (KED)	0.679 ppb	13,027 cps	
63Cu (KED)	14.366 ppb	205,078 cps	
64Zn (KED)	241.961 ppb	941,470 cps	
69Ga (KED)	2.122 ppb	12,696 cps	
75As (KED)	1.233 ppb	1,567 cps	
80Se (KED)	0.520 ppb	2,250 cps	
85Rb (KED)	3.629 ppb	21,241 cps	
88Sr (KED)	8.841 ppb	76,722 cps	
89Y (KED)	118.134 %	495,214 cps	
107Ag (KED)	0.052 ppb	1,903 cps	
114Cd (KED)	0.077 ppb	1,100 cps	
115In (KED)	114.036 %	859,943 cps	
133Cs (KED)	0.079 ppb	2,167 cps	
138Ba (KED)	9.486 ppb	343,203 cps	
139La (KED)	0.560 ppb	39,680 cps	
140Ce (KED)	1.124 ppb	101,178 cps	
141Pr (KED)	0.135 ppb	13,117 cps	
142Nd (KED)	0.731 ppb	28,048 cps	
152Sm (KED)	0.102 ppb	3,544 cps	
153Eu (KED)	0.020 ppb	1,430 cps	
158Gd (KED)	0.089 ppb	3,894 cps	
159Tb (KED)	124.333 %	3,957,555 cps	
164Dy (KED)	0.063 ppb	3,124 cps	
166Er (KED)	0.032 ppb	2,420 cps	
169Tm (KED)	0.005 ppb	1,093 cps	
174Yb (KED)	0.024 ppb	1,700 cps	
175Lu (KED)	-0.118 ppb	37,249 cps	
205Tl (KED)	0.013 ppb	1,580 cps	
208Pb (KED)	3.441 ppb	315,120 cps	
209Bi (KED)	113.901 %	3,177,653 cps	
232Th (KED)	0.191 ppb	34,484 cps	
238U (KED)	0.057 ppb	11,989 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 7

Analysis name: 2ti

Analysis started at: 10/9/2021 3:28:26 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	132.978 %	
9Be (KED)	0.026 ppb	
11B (KED)	-16.387 ppb	
24Mg (KED)	416.298 ppb	
27Al (KED)	460.902 ppb	
45Sc (KED)	128.194 %	
51V (KED)	0.926 ppb	
52Cr (KED)	11.203 ppb	
55Mn (KED)	15.031 ppb	
56Fe (KED)	553.248 ppb	
58Ni (KED)	3.385 ppb	
59Co (KED)	0.293 ppb	
63Cu (KED)	8.078 ppb	
64Zn (KED)	199.780 ppb	
69Ga (KED)	1.458 ppb	
75As (KED)	0.313 ppb	
80Se (KED)	0.716 ppb	
85Rb (KED)	2.117 ppb	
88Sr (KED)	6.638 ppb	
89Y (KED)	129.813 %	
107Ag (KED)	0.048 ppb	
114Cd (KED)	0.064 ppb	
115In (KED)	127.949 %	
133Cs (KED)	0.074 ppb	
138Ba (KED)	6.376 ppb	
139La (KED)	0.527 ppb	
140Ce (KED)	1.103 ppb	
141Pr (KED)	0.132 ppb	
142Nd (KED)	0.725 ppb	
152Sm (KED)	0.105 ppb	
153Eu (KED)	0.017 ppb	
158Gd (KED)	0.084 ppb	
159Tb (KED)	137.026 %	
164Dy (KED)	0.057 ppb	
166Er (KED)	0.026 ppb	
169Tm (KED)	0.004 ppb	
174Yb (KED)	0.022 ppb	
175Lu (KED)	-0.141 ppb	
205Tl (KED)	0.010 ppb	
208Pb (KED)	1.247 ppb	
209Bi (KED)	126.636 %	
232Th (KED)	0.235 ppb	
238U (KED)	0.037 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	132.978 %	2,877 cps	
9Be (KED)	0.026 ppb	3 cps	
11B (KED)	-16.387 ppb	390 cps	
24Mg (KED)	416.298 ppb	225,133 cps	
27Al (KED)	460.902 ppb	71,360 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	128.194 %	58,503 cps	
51V (KED)	0.926 ppb	7,005 cps	
52Cr (KED)	11.203 ppb	125,915 cps	
55Mn (KED)	15.031 ppb	95,742 cps	
56Fe (KED)	553.248 ppb	5,822,739 cps	
58Ni (KED)	3.385 ppb	42,873 cps	
59Co (KED)	0.293 ppb	6,215 cps	
63Cu (KED)	8.078 ppb	127,188 cps	
64Zn (KED)	199.780 ppb	854,598 cps	
69Ga (KED)	1.458 ppb	9,614 cps	
75As (KED)	0.313 ppb	450 cps	
80Se (KED)	0.716 ppb	2,560 cps	
85Rb (KED)	2.117 ppb	13,631 cps	
88Sr (KED)	6.638 ppb	63,387 cps	
89Y (KED)	129.813 %	544,171 cps	
107Ag (KED)	0.048 ppb	1,960 cps	
114Cd (KED)	0.064 ppb	1,040 cps	
115In (KED)	127.949 %	964,865 cps	
133Cs (KED)	0.074 ppb	2,300 cps	
138Ba (KED)	6.376 ppb	254,851 cps	
139La (KED)	0.527 ppb	41,201 cps	
140Ce (KED)	1.103 ppb	109,420 cps	
141Pr (KED)	0.132 ppb	14,118 cps	
142Nd (KED)	0.725 ppb	30,648 cps	
152Sm (KED)	0.105 ppb	4,017 cps	
153Eu (KED)	0.017 ppb	1,337 cps	
158Gd (KED)	0.084 ppb	4,034 cps	
159Tb (KED)	137.026 %	4,361,600 cps	
164Dy (KED)	0.057 ppb	3,100 cps	
166Er (KED)	0.026 ppb	2,244 cps	
169Tm (KED)	0.004 ppb	913 cps	
174Yb (KED)	0.022 ppb	1,663 cps	
175Lu (KED)	-0.141 ppb	37,630 cps	
205Tl (KED)	0.010 ppb	1,367 cps	
208Pb (KED)	1.247 ppb	133,823 cps	
209Bi (KED)	126.636 %	3,532,938 cps	
232Th (KED)	0.235 ppb	47,082 cps	
238U (KED)	0.037 ppb	8,783 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 8

Analysis name: w19ti

Analysis started at: 10/9/2021 3:31:18 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	145.923 %	
9Be (KED)	0.071 ppb	
11B (KED)	-12.749 ppb	
24Mg (KED)	824.508 ppb	
27Al (KED)	1,033.162 ppb	
45Sc (KED)	142.214 %	
51V (KED)	1.904 ppb	
52Cr (KED)	3.676 ppb	
55Mn (KED)	30.860 ppb	
56Fe (KED)	1,131.793 ppb	
58Ni (KED)	5.333 ppb	
59Co (KED)	0.469 ppb	
63Cu (KED)	10.726 ppb	
64Zn (KED)	164.153 ppb	
69Ga (KED)	3.038 ppb	
75As (KED)	0.492 ppb	
80Se (KED)	0.865 ppb	
85Rb (KED)	4.156 ppb	
88Sr (KED)	13.340 ppb	
89Y (KED)	141.532 %	
107Ag (KED)	0.092 ppb	
114Cd (KED)	0.063 ppb	
115In (KED)	132.828 %	
133Cs (KED)	0.175 ppb	
138Ba (KED)	12.714 ppb	
139La (KED)	1.223 ppb	
140Ce (KED)	2.431 ppb	
141Pr (KED)	0.286 ppb	
142Nd (KED)	1.495 ppb	
152Sm (KED)	0.195 ppb	
153Eu (KED)	0.040 ppb	
158Gd (KED)	0.170 ppb	
159Tb (KED)	149.878 %	
164Dy (KED)	0.114 ppb	
166Er (KED)	0.059 ppb	
169Tm (KED)	0.008 ppb	
174Yb (KED)	0.043 ppb	
175Lu (KED)	-0.178 ppb	
205Tl (KED)	0.016 ppb	
208Pb (KED)	1.509 ppb	
209Bi (KED)	126.619 %	
232Th (KED)	0.348 ppb	
238U (KED)	0.064 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	145.923 %	3,157 cps	
9Be (KED)	0.071 ppb	10 cps	
11B (KED)	-12.749 ppb	713 cps	
24Mg (KED)	824.508 ppb	488,538 cps	
27Al (KED)	1,033.162 ppb	177,172 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	142.214 %	64,902 cps	
51V (KED)	1.904 ppb	15,974 cps	
52Cr (KED)	3.676 ppb	46,035 cps	
55Mn (KED)	30.860 ppb	217,896 cps	
56Fe (KED)	1,131.793 ppb	13,202,278 cps	
58Ni (KED)	5.333 ppb	74,508 cps	
59Co (KED)	0.469 ppb	11,005 cps	
63Cu (KED)	10.726 ppb	183,745 cps	
64Zn (KED)	164.153 ppb	766,038 cps	
69Ga (KED)	3.038 ppb	21,736 cps	
75As (KED)	0.492 ppb	760 cps	
80Se (KED)	0.865 ppb	2,864 cps	
85Rb (KED)	4.156 ppb	29,141 cps	
88Sr (KED)	13.340 ppb	138,478 cps	
89Y (KED)	141.532 %	593,295 cps	
107Ag (KED)	0.092 ppb	3,924 cps	
114Cd (KED)	0.063 ppb	1,067 cps	
115In (KED)	132.828 %	1,001,659 cps	
133Cs (KED)	0.175 ppb	5,541 cps	
138Ba (KED)	12.714 ppb	553,834 cps	
139La (KED)	1.223 ppb	104,115 cps	
140Ce (KED)	2.431 ppb	262,602 cps	
141Pr (KED)	0.286 ppb	33,368 cps	
142Nd (KED)	1.495 ppb	68,920 cps	
152Sm (KED)	0.195 ppb	8,103 cps	
153Eu (KED)	0.040 ppb	3,340 cps	
158Gd (KED)	0.170 ppb	8,890 cps	
159Tb (KED)	149.878 %	4,770,664 cps	
164Dy (KED)	0.114 ppb	6,718 cps	
166Er (KED)	0.059 ppb	4,758 cps	
169Tm (KED)	0.008 ppb	1,837 cps	
174Yb (KED)	0.043 ppb	3,544 cps	
175Lu (KED)	-0.178 ppb	35,163 cps	
205Tl (KED)	0.016 ppb	2,247 cps	
208Pb (KED)	1.509 ppb	159,666 cps	
209Bi (KED)	126.619 %	3,532,456 cps	
232Th (KED)	0.348 ppb	69,429 cps	
238U (KED)	0.064 ppb	14,866 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 9

Analysis name: 7ti

Analysis started at: 10/9/2021 3:34:03 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	152.395 %	
9Be (KED)	0.068 ppb	
11B (KED)	-13.461 ppb	
24Mg (KED)	802.669 ppb	
27Al (KED)	916.670 ppb	
45Sc (KED)	154.412 %	
51V (KED)	1.699 ppb	
52Cr (KED)	3.216 ppb	
55Mn (KED)	28.734 ppb	
56Fe (KED)	1,043.478 ppb	
58Ni (KED)	4.883 ppb	
59Co (KED)	0.506 ppb	
63Cu (KED)	10.071 ppb	
64Zn (KED)	177.706 ppb	
69Ga (KED)	2.990 ppb	
75As (KED)	0.424 ppb	
80Se (KED)	1.238 ppb	
85Rb (KED)	5.167 ppb	
88Sr (KED)	12.364 ppb	
89Y (KED)	150.143 %	
107Ag (KED)	0.115 ppb	
114Cd (KED)	0.124 ppb	
115In (KED)	144.399 %	
133Cs (KED)	0.161 ppb	
138Ba (KED)	11.920 ppb	
139La (KED)	0.942 ppb	
140Ce (KED)	2.012 ppb	
141Pr (KED)	0.243 ppb	
142Nd (KED)	1.262 ppb	
152Sm (KED)	0.176 ppb	
153Eu (KED)	0.034 ppb	
158Gd (KED)	0.150 ppb	
159Tb (KED)	155.752 %	
164Dy (KED)	0.113 ppb	
166Er (KED)	0.052 ppb	
169Tm (KED)	0.007 ppb	
174Yb (KED)	0.039 ppb	
175Lu (KED)	-0.192 ppb	
205Tl (KED)	0.013 ppb	
208Pb (KED)	1.719 ppb	
209Bi (KED)	133.996 %	
232Th (KED)	0.339 ppb	
238U (KED)	0.062 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	152.395 %	3,297 cps	
9Be (KED)	0.068 ppb	10 cps	
11B (KED)	-13.461 ppb	687 cps	
24Mg (KED)	802.669 ppb	496,715 cps	
27Al (KED)	916.670 ppb	170,707 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	154.412 %	70,468 cps	
51V (KED)	1.699 ppb	15,476 cps	
52Cr (KED)	3.216 ppb	43,773 cps	
55Mn (KED)	28.734 ppb	220,301 cps	
56Fe (KED)	1,043.478 ppb	13,217,101 cps	
58Ni (KED)	4.883 ppb	74,143 cps	
59Co (KED)	0.506 ppb	12,873 cps	
63Cu (KED)	10.071 ppb	183,102 cps	
64Zn (KED)	177.706 ppb	879,521 cps	
69Ga (KED)	2.990 ppb	22,694 cps	
75As (KED)	0.424 ppb	697 cps	
80Se (KED)	1.238 ppb	3,230 cps	
85Rb (KED)	5.167 ppb	38,422 cps	
88Sr (KED)	12.364 ppb	136,189 cps	
89Y (KED)	150.143 %	629,395 cps	
107Ag (KED)	0.115 ppb	5,318 cps	
114Cd (KED)	0.124 ppb	2,217 cps	
115In (KED)	144.399 %	1,088,909 cps	
133Cs (KED)	0.161 ppb	5,555 cps	
138Ba (KED)	11.920 ppb	539,744 cps	
139La (KED)	0.942 ppb	83,374 cps	
140Ce (KED)	2.012 ppb	226,085 cps	
141Pr (KED)	0.243 ppb	29,535 cps	
142Nd (KED)	1.262 ppb	60,483 cps	
152Sm (KED)	0.176 ppb	7,586 cps	
153Eu (KED)	0.034 ppb	2,900 cps	
158Gd (KED)	0.150 ppb	8,129 cps	
159Tb (KED)	155.752 %	4,957,634 cps	
164Dy (KED)	0.113 ppb	6,932 cps	
166Er (KED)	0.052 ppb	4,447 cps	
169Tm (KED)	0.007 ppb	1,713 cps	
174Yb (KED)	0.039 ppb	3,397 cps	
175Lu (KED)	-0.192 ppb	34,194 cps	
205Tl (KED)	0.013 ppb	1,873 cps	
208Pb (KED)	1.719 ppb	190,974 cps	
209Bi (KED)	133.996 %	3,738,265 cps	
232Th (KED)	0.339 ppb	71,605 cps	
238U (KED)	0.062 ppb	15,246 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 10

Analysis name: 12ti

Analysis started at: 10/9/2021 3:36:38 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	167.190 %	
9Be (KED)	0.000 ppb	
11B (KED)	-15.797 ppb	
24Mg (KED)	636.804 ppb	
27Al (KED)	768.006 ppb	
45Sc (KED)	168.938 %	
51V (KED)	1.338 ppb	
52Cr (KED)	2.530 ppb	
55Mn (KED)	21.751 ppb	
56Fe (KED)	808.622 ppb	
58Ni (KED)	3.717 ppb	
59Co (KED)	0.361 ppb	
63Cu (KED)	9.451 ppb	
64Zn (KED)	167.490 ppb	
69Ga (KED)	2.180 ppb	
75As (KED)	0.315 ppb	
80Se (KED)	0.693 ppb	
85Rb (KED)	5.203 ppb	
88Sr (KED)	9.638 ppb	
89Y (KED)	162.589 %	
107Ag (KED)	0.037 ppb	
114Cd (KED)	0.057 ppb	
115In (KED)	150.133 %	
133Cs (KED)	0.134 ppb	
138Ba (KED)	8.998 ppb	
139La (KED)	0.721 ppb	
140Ce (KED)	1.483 ppb	
141Pr (KED)	0.177 ppb	
142Nd (KED)	0.905 ppb	
152Sm (KED)	0.131 ppb	
153Eu (KED)	0.026 ppb	
158Gd (KED)	0.113 ppb	
159Tb (KED)	168.163 %	
164Dy (KED)	0.081 ppb	
166Er (KED)	0.038 ppb	
169Tm (KED)	0.005 ppb	
174Yb (KED)	0.030 ppb	
175Lu (KED)	-0.199 ppb	
205Tl (KED)	0.011 ppb	
208Pb (KED)	1.013 ppb	
209Bi (KED)	140.196 %	
232Th (KED)	0.217 ppb	
238U (KED)	0.049 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	167.190 %	3,617 cps	
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	-15.797 ppb	543 cps	
24Mg (KED)	636.804 ppb	432,514 cps	
27Al (KED)	768.006 ppb	156,520 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	168.938 %	77,098 cps	
51V (KED)	1.338 ppb	13,334 cps	
52Cr (KED)	2.530 ppb	37,747 cps	
55Mn (KED)	21.751 ppb	182,498 cps	
56Fe (KED)	808.622 ppb	11,208,953 cps	
58Ni (KED)	3.717 ppb	61,963 cps	
59Co (KED)	0.361 ppb	10,091 cps	
63Cu (KED)	9.451 ppb	186,153 cps	
64Zn (KED)	167.490 ppb	897,845 cps	
69Ga (KED)	2.180 ppb	17,946 cps	
75As (KED)	0.315 ppb	567 cps	
80Se (KED)	0.693 ppb	3,194 cps	
85Rb (KED)	5.203 ppb	41,894 cps	
88Sr (KED)	9.638 ppb	115,065 cps	
89Y (KED)	162.589 %	681,568 cps	
107Ag (KED)	0.037 ppb	1,790 cps	
114Cd (KED)	0.057 ppb	1,090 cps	
115In (KED)	150.133 %	1,132,150 cps	
133Cs (KED)	0.134 ppb	4,824 cps	
138Ba (KED)	8.998 ppb	440,441 cps	
139La (KED)	0.721 ppb	68,970 cps	
140Ce (KED)	1.483 ppb	180,134 cps	
141Pr (KED)	0.177 ppb	23,222 cps	
142Nd (KED)	0.905 ppb	46,928 cps	
152Sm (KED)	0.131 ppb	6,112 cps	
153Eu (KED)	0.026 ppb	2,447 cps	
158Gd (KED)	0.113 ppb	6,625 cps	
159Tb (KED)	168.163 %	5,352,691 cps	
164Dy (KED)	0.081 ppb	5,398 cps	
166Er (KED)	0.038 ppb	3,731 cps	
169Tm (KED)	0.005 ppb	1,373 cps	
174Yb (KED)	0.030 ppb	2,844 cps	
175Lu (KED)	-0.199 ppb	35,675 cps	
205Tl (KED)	0.011 ppb	1,783 cps	
208Pb (KED)	1.013 ppb	122,589 cps	
209Bi (KED)	140.196 %	3,911,240 cps	
232Th (KED)	0.217 ppb	48,196 cps	
238U (KED)	0.049 ppb	12,583 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 11

Analysis name: 20ti

Analysis started at: 10/9/2021 3:39:27 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	187.379 %	
9Be (KED)	0.018 ppb	
11B (KED)	-6.056 ppb	
24Mg (KED)	947.034 ppb	
27Al (KED)	1,143.714 ppb	
45Sc (KED)	182.847 %	
51V (KED)	2.082 ppb	
52Cr (KED)	3.729 ppb	
55Mn (KED)	33.766 ppb	
56Fe (KED)	1,249.430 ppb	
58Ni (KED)	5.585 ppb	
59Co (KED)	0.535 ppb	
63Cu (KED)	10.050 ppb	
64Zn (KED)	188.475 ppb	
69Ga (KED)	3.574 ppb	
75As (KED)	0.492 ppb	
80Se (KED)	0.762 ppb	
85Rb (KED)	6.656 ppb	
88Sr (KED)	14.895 ppb	
89Y (KED)	169.021 %	
107Ag (KED)	0.068 ppb	
114Cd (KED)	0.167 ppb	
115In (KED)	156.640 %	
133Cs (KED)	0.188 ppb	
138Ba (KED)	14.707 ppb	
139La (KED)	1.301 ppb	
140Ce (KED)	2.645 ppb	
141Pr (KED)	0.322 ppb	
142Nd (KED)	1.652 ppb	
152Sm (KED)	0.224 ppb	
153Eu (KED)	0.043 ppb	
158Gd (KED)	0.197 ppb	
159Tb (KED)	170.556 %	
164Dy (KED)	0.133 ppb	
166Er (KED)	0.065 ppb	
169Tm (KED)	0.008 ppb	
174Yb (KED)	0.049 ppb	
175Lu (KED)	-0.211 ppb	
205Tl (KED)	0.015 ppb	
208Pb (KED)	1.656 ppb	
209Bi (KED)	141.726 %	
232Th (KED)	0.375 ppb	
238U (KED)	0.067 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	187.379 %	4,054 cps	
9Be (KED)	0.018 ppb	3 cps	
11B (KED)	-6.056 ppb	1,590 cps	
24Mg (KED)	947.034 ppb	720,408 cps	
27Al (KED)	1,143.714 ppb	252,137 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	182.847 %	83,445 cps	
51V (KED)	2.082 ppb	22,457 cps	
52Cr (KED)	3.729 ppb	60,041 cps	
55Mn (KED)	33.766 ppb	306,509 cps	
56Fe (KED)	1,249.430 ppb	18,737,168 cps	
58Ni (KED)	5.585 ppb	100,278 cps	
59Co (KED)	0.535 ppb	16,140 cps	
63Cu (KED)	10.050 ppb	205,683 cps	
64Zn (KED)	188.475 ppb	1,049,924 cps	
69Ga (KED)	3.574 ppb	30,517 cps	
75As (KED)	0.492 ppb	907 cps	
80Se (KED)	0.762 ppb	3,360 cps	
85Rb (KED)	6.656 ppb	55,704 cps	
88Sr (KED)	14.895 ppb	184,598 cps	
89Y (KED)	169.021 %	708,530 cps	
107Ag (KED)	0.068 ppb	3,417 cps	
114Cd (KED)	0.167 ppb	3,224 cps	
115In (KED)	156.640 %	1,181,219 cps	
133Cs (KED)	0.188 ppb	7,012 cps	
138Ba (KED)	14.707 ppb	728,671 cps	
139La (KED)	1.301 ppb	125,972 cps	
140Ce (KED)	2.645 ppb	325,036 cps	
141Pr (KED)	0.322 ppb	42,760 cps	
142Nd (KED)	1.652 ppb	86,623 cps	
152Sm (KED)	0.224 ppb	10,575 cps	
153Eu (KED)	0.043 ppb	4,081 cps	
158Gd (KED)	0.197 ppb	11,669 cps	
159Tb (KED)	170.556 %	5,428,868 cps	
164Dy (KED)	0.133 ppb	8,943 cps	
166Er (KED)	0.065 ppb	5,955 cps	
169Tm (KED)	0.008 ppb	2,210 cps	
174Yb (KED)	0.049 ppb	4,611 cps	
175Lu (KED)	-0.211 ppb	33,860 cps	
205Tl (KED)	0.015 ppb	2,310 cps	
208Pb (KED)	1.656 ppb	195,020 cps	
209Bi (KED)	141.726 %	3,953,928 cps	
232Th (KED)	0.375 ppb	83,710 cps	
238U (KED)	0.067 ppb	17,265 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 12

Analysis name: 4-2ti

Analysis started at: 10/9/2021 3:42:00 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	200.634 %	
9Be (KED)	0.000 ppb	
11B (KED)	-15.878 ppb	
24Mg (KED)	323.870 ppb	
27Al (KED)	357.122 ppb	
45Sc (KED)	190.016 %	
51V (KED)	0.647 ppb	
52Cr (KED)	1.567 ppb	
55Mn (KED)	9.385 ppb	
56Fe (KED)	367.490 ppb	
58Ni (KED)	1.872 ppb	
59Co (KED)	0.194 ppb	
63Cu (KED)	9.994 ppb	
64Zn (KED)	153.461 ppb	
69Ga (KED)	1.203 ppb	
75As (KED)	0.180 ppb	
80Se (KED)	1.126 ppb	
85Rb (KED)	5.074 ppb	
88Sr (KED)	4.887 ppb	
89Y (KED)	177.956 %	
107Ag (KED)	0.035 ppb	
114Cd (KED)	0.044 ppb	
115In (KED)	164.837 %	
133Cs (KED)	0.063 ppb	
138Ba (KED)	4.866 ppb	
139La (KED)	0.315 ppb	
140Ce (KED)	0.675 ppb	
141Pr (KED)	0.080 ppb	
142Nd (KED)	0.422 ppb	
152Sm (KED)	0.064 ppb	
153Eu (KED)	0.012 ppb	
158Gd (KED)	0.051 ppb	
159Tb (KED)	171.628 %	
164Dy (KED)	0.038 ppb	
166Er (KED)	0.019 ppb	
169Tm (KED)	0.002 ppb	
174Yb (KED)	0.014 ppb	
175Lu (KED)	-0.218 ppb	
205Tl (KED)	0.007 ppb	
208Pb (KED)	0.680 ppb	
209Bi (KED)	146.109 %	
232Th (KED)	0.108 ppb	
238U (KED)	0.025 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	200.634 %	4,341 cps	
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	-15.878 ppb	643 cps	
24Mg (KED)	323.870 ppb	264,497 cps	
27Al (KED)	357.122 ppb	82,025 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	190.016 %	86,717 cps	
51V (KED)	0.647 ppb	7,265 cps	
52Cr (KED)	1.567 ppb	26,445 cps	
55Mn (KED)	9.385 ppb	88,694 cps	
56Fe (KED)	367.490 ppb	5,738,114 cps	
58Ni (KED)	1.872 ppb	35,607 cps	
59Co (KED)	0.194 ppb	6,135 cps	
63Cu (KED)	9.994 ppb	215,354 cps	
64Zn (KED)	153.461 ppb	900,656 cps	
69Ga (KED)	1.203 ppb	10,898 cps	
75As (KED)	0.180 ppb	363 cps	
80Se (KED)	1.126 ppb	3,761 cps	
85Rb (KED)	5.074 ppb	44,723 cps	
88Sr (KED)	4.887 ppb	64,118 cps	
89Y (KED)	177.956 %	745,985 cps	
107Ag (KED)	0.035 ppb	1,863 cps	
114Cd (KED)	0.044 ppb	943 cps	
115In (KED)	164.837 %	1,243,035 cps	
133Cs (KED)	0.063 ppb	2,514 cps	
138Ba (KED)	4.866 ppb	244,181 cps	
139La (KED)	0.315 ppb	30,955 cps	
140Ce (KED)	0.675 ppb	84,334 cps	
141Pr (KED)	0.080 ppb	10,818 cps	
142Nd (KED)	0.422 ppb	22,437 cps	
152Sm (KED)	0.064 ppb	3,074 cps	
153Eu (KED)	0.012 ppb	1,207 cps	
158Gd (KED)	0.051 ppb	3,067 cps	
159Tb (KED)	171.628 %	5,462,979 cps	
164Dy (KED)	0.038 ppb	2,570 cps	
166Er (KED)	0.019 ppb	2,284 cps	
169Tm (KED)	0.002 ppb	657 cps	
174Yb (KED)	0.014 ppb	1,403 cps	
175Lu (KED)	-0.218 ppb	32,783 cps	
205Tl (KED)	0.007 ppb	1,113 cps	
208Pb (KED)	0.680 ppb	89,857 cps	
209Bi (KED)	146.109 %	4,076,208 cps	
232Th (KED)	0.108 ppb	25,272 cps	
238U (KED)	0.025 ppb	6,738 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 13

Analysis name: 00077ti

Analysis started at: 10/9/2021 3:44:59 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	204.179 %	
9Be (KED)	0.051 ppb	
11B (KED)	-12.610 ppb	
24Mg (KED)	557.992 ppb	
27Al (KED)	548.819 ppb	
45Sc (KED)	206.696 %	
51V (KED)	0.949 ppb	
52Cr (KED)	2.008 ppb	
55Mn (KED)	16.390 ppb	
56Fe (KED)	540.183 ppb	
58Ni (KED)	2.610 ppb	
59Co (KED)	0.242 ppb	
63Cu (KED)	9.634 ppb	
64Zn (KED)	168.120 ppb	
69Ga (KED)	1.938 ppb	
75As (KED)	0.264 ppb	
80Se (KED)	0.833 ppb	
85Rb (KED)	7.149 ppb	
88Sr (KED)	7.806 ppb	
89Y (KED)	185.858 %	
107Ag (KED)	0.051 ppb	
114Cd (KED)	0.060 ppb	
115In (KED)	171.358 %	
133Cs (KED)	0.094 ppb	
138Ba (KED)	7.749 ppb	
139La (KED)	0.557 ppb	
140Ce (KED)	1.135 ppb	
141Pr (KED)	0.136 ppb	
142Nd (KED)	0.705 ppb	
152Sm (KED)	0.100 ppb	
153Eu (KED)	0.018 ppb	
158Gd (KED)	0.086 ppb	
159Tb (KED)	177.292 %	
164Dy (KED)	0.062 ppb	
166Er (KED)	0.025 ppb	
169Tm (KED)	0.003 ppb	
174Yb (KED)	0.022 ppb	
175Lu (KED)	-0.221 ppb	
205Tl (KED)	0.013 ppb	
208Pb (KED)	0.785 ppb	
209Bi (KED)	145.101 %	
232Th (KED)	0.177 ppb	
238U (KED)	0.030 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	204.179 %	4,417 cps	
9Be (KED)	0.051 ppb	10 cps	
11B (KED)	-12.610 ppb	1,013 cps	
24Mg (KED)	557.992 ppb	462,965 cps	
27Al (KED)	548.819 ppb	136,942 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	206.696 %	94,329 cps	
51V (KED)	0.949 ppb	11,575 cps	
52Cr (KED)	2.008 ppb	36,744 cps	
55Mn (KED)	16.390 ppb	168,314 cps	
56Fe (KED)	540.183 ppb	9,167,043 cps	
58Ni (KED)	2.610 ppb	53,565 cps	
59Co (KED)	0.242 ppb	8,309 cps	
63Cu (KED)	9.634 ppb	216,877 cps	
64Zn (KED)	168.120 ppb	1,030,180 cps	
69Ga (KED)	1.938 ppb	18,257 cps	
75As (KED)	0.264 ppb	547 cps	
80Se (KED)	0.833 ppb	3,741 cps	
85Rb (KED)	7.149 ppb	65,794 cps	
88Sr (KED)	7.806 ppb	106,639 cps	
89Y (KED)	185.858 %	779,107 cps	
107Ag (KED)	0.051 ppb	2,800 cps	
114Cd (KED)	0.060 ppb	1,313 cps	
115In (KED)	171.358 %	1,292,213 cps	
133Cs (KED)	0.094 ppb	3,874 cps	
138Ba (KED)	7.749 ppb	400,221 cps	
139La (KED)	0.557 ppb	56,327 cps	
140Ce (KED)	1.135 ppb	145,695 cps	
141Pr (KED)	0.136 ppb	18,844 cps	
142Nd (KED)	0.705 ppb	38,583 cps	
152Sm (KED)	0.100 ppb	4,928 cps	
153Eu (KED)	0.018 ppb	1,797 cps	
158Gd (KED)	0.086 ppb	5,361 cps	
159Tb (KED)	177.292 %	5,643,284 cps	
164Dy (KED)	0.062 ppb	4,361 cps	
166Er (KED)	0.025 ppb	2,830 cps	
169Tm (KED)	0.003 ppb	1,060 cps	
174Yb (KED)	0.022 ppb	2,154 cps	
175Lu (KED)	-0.221 ppb	33,295 cps	
205Tl (KED)	0.013 ppb	2,010 cps	
208Pb (KED)	0.785 ppb	101,165 cps	
209Bi (KED)	145.101 %	4,048,070 cps	
232Th (KED)	0.177 ppb	40,750 cps	
238U (KED)	0.030 ppb	8,176 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 14

Analysis name: 0299ti

Analysis started at: 10/9/2021 3:48:29 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	203.408 %	
9Be (KED)	0.034 ppb	
11B (KED)	-16.447 ppb	
24Mg (KED)	448.083 ppb	
27Al (KED)	312.221 ppb	
45Sc (KED)	221.948 %	
51V (KED)	0.572 ppb	
52Cr (KED)	2.985 ppb	
55Mn (KED)	9.663 ppb	
56Fe (KED)	338.230 ppb	
58Ni (KED)	1.986 ppb	
59Co (KED)	0.158 ppb	
63Cu (KED)	11.042 ppb	
64Zn (KED)	170.530 ppb	
69Ga (KED)	1.129 ppb	
75As (KED)	0.187 ppb	
80Se (KED)	0.939 ppb	
85Rb (KED)	6.988 ppb	
88Sr (KED)	5.298 ppb	
89Y (KED)	193.482 %	
107Ag (KED)	0.055 ppb	
114Cd (KED)	0.047 ppb	
115In (KED)	174.048 %	
133Cs (KED)	0.060 ppb	
138Ba (KED)	4.700 ppb	
139La (KED)	0.331 ppb	
140Ce (KED)	0.698 ppb	
141Pr (KED)	0.093 ppb	
142Nd (KED)	0.465 ppb	
152Sm (KED)	0.058 ppb	
153Eu (KED)	0.011 ppb	
158Gd (KED)	0.049 ppb	
159Tb (KED)	182.830 %	
164Dy (KED)	0.033 ppb	
166Er (KED)	0.016 ppb	
169Tm (KED)	0.002 ppb	
174Yb (KED)	0.012 ppb	
175Lu (KED)	-0.234 ppb	
205Tl (KED)	0.010 ppb	
208Pb (KED)	0.718 ppb	
209Bi (KED)	145.209 %	
232Th (KED)	0.098 ppb	
238U (KED)	0.025 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	203.408 %	4,401 cps	
9Be (KED)	0.034 ppb	7 cps	
11B (KED)	-16.447 ppb	590 cps	
24Mg (KED)	448.083 ppb	370,584 cps	
27Al (KED)	312.221 ppb	83,808 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	221.948 %	101,289 cps	
51V (KED)	0.572 ppb	7,496 cps	
52Cr (KED)	2.985 ppb	58,427 cps	
55Mn (KED)	9.663 ppb	106,662 cps	
56Fe (KED)	338.230 ppb	6,170,163 cps	
58Ni (KED)	1.986 ppb	44,041 cps	
59Co (KED)	0.158 ppb	5,845 cps	
63Cu (KED)	11.042 ppb	258,544 cps	
64Zn (KED)	170.530 ppb	1,087,767 cps	
69Ga (KED)	1.129 ppb	11,132 cps	
75As (KED)	0.187 ppb	410 cps	
80Se (KED)	0.939 ppb	3,964 cps	
85Rb (KED)	6.988 ppb	66,946 cps	
88Sr (KED)	5.298 ppb	75,526 cps	
89Y (KED)	193.482 %	811,066 cps	
107Ag (KED)	0.055 ppb	3,100 cps	
114Cd (KED)	0.047 ppb	1,047 cps	
115In (KED)	174.048 %	1,312,494 cps	
133Cs (KED)	0.060 ppb	2,520 cps	
138Ba (KED)	4.700 ppb	251,314 cps	
139La (KED)	0.331 ppb	34,671 cps	
140Ce (KED)	0.698 ppb	92,811 cps	
141Pr (KED)	0.093 ppb	13,371 cps	
142Nd (KED)	0.465 ppb	26,321 cps	
152Sm (KED)	0.058 ppb	2,987 cps	
153Eu (KED)	0.011 ppb	1,153 cps	
158Gd (KED)	0.049 ppb	3,150 cps	
159Tb (KED)	182.830 %	5,819,555 cps	
164Dy (KED)	0.033 ppb	2,374 cps	
166Er (KED)	0.016 ppb	2,157 cps	
169Tm (KED)	0.002 ppb	627 cps	
174Yb (KED)	0.012 ppb	1,270 cps	
175Lu (KED)	-0.234 ppb	31,881 cps	
205Tl (KED)	0.010 ppb	1,630 cps	
208Pb (KED)	0.718 ppb	93,620 cps	
209Bi (KED)	145.209 %	4,051,089 cps	
232Th (KED)	0.098 ppb	22,841 cps	
238U (KED)	0.025 ppb	6,929 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 15

Analysis name: 5ti

Analysis started at: 10/9/2021 3:51:35 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	230.072 %	
9Be (KED)	0.000 ppb	
11B (KED)	-17.099 ppb	
24Mg (KED)	322.950 ppb	
27Al (KED)	319.520 ppb	
45Sc (KED)	214.144 %	
51V (KED)	0.540 ppb	
52Cr (KED)	1.898 ppb	
55Mn (KED)	8.953 ppb	
56Fe (KED)	332.201 ppb	
58Ni (KED)	1.650 ppb	
59Co (KED)	0.150 ppb	
63Cu (KED)	8.930 ppb	
64Zn (KED)	167.584 ppb	
69Ga (KED)	1.029 ppb	
75As (KED)	0.185 ppb	
80Se (KED)	0.944 ppb	
85Rb (KED)	3.521 ppb	
88Sr (KED)	4.625 ppb	
89Y (KED)	200.639 %	
107Ag (KED)	0.042 ppb	
114Cd (KED)	0.058 ppb	
115In (KED)	179.365 %	
133Cs (KED)	0.057 ppb	
138Ba (KED)	4.510 ppb	
139La (KED)	0.287 ppb	
140Ce (KED)	0.599 ppb	
141Pr (KED)	0.072 ppb	
142Nd (KED)	0.372 ppb	
152Sm (KED)	0.050 ppb	
153Eu (KED)	0.010 ppb	
158Gd (KED)	0.047 ppb	
159Tb (KED)	186.857 %	
164Dy (KED)	0.030 ppb	
166Er (KED)	0.013 ppb	
169Tm (KED)	0.002 ppb	
174Yb (KED)	0.012 ppb	
175Lu (KED)	-0.228 ppb	
205Tl (KED)	0.006 ppb	
208Pb (KED)	0.770 ppb	
209Bi (KED)	151.381 %	
232Th (KED)	0.086 ppb	
238U (KED)	0.024 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	230.072 %	4,978 cps	
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	-17.099 ppb	587 cps	
24Mg (KED)	322.950 ppb	302,448 cps	
27Al (KED)	319.520 ppb	82,743 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	214.144 %	97,728 cps	
51V (KED)	0.540 ppb	6,829 cps	
52Cr (KED)	1.898 ppb	36,012 cps	
55Mn (KED)	8.953 ppb	95,370 cps	
56Fe (KED)	332.201 ppb	5,847,428 cps	
58Ni (KED)	1.650 ppb	35,497 cps	
59Co (KED)	0.150 ppb	5,358 cps	
63Cu (KED)	8.930 ppb	217,145 cps	
64Zn (KED)	167.584 ppb	1,108,577 cps	
69Ga (KED)	1.029 ppb	10,524 cps	
75As (KED)	0.185 ppb	420 cps	
80Se (KED)	0.944 ppb	4,114 cps	
85Rb (KED)	3.521 ppb	34,999 cps	
88Sr (KED)	4.625 ppb	68,435 cps	
89Y (KED)	200.639 %	841,069 cps	
107Ag (KED)	0.042 ppb	2,437 cps	
114Cd (KED)	0.058 ppb	1,330 cps	
115In (KED)	179.365 %	1,352,589 cps	
133Cs (KED)	0.057 ppb	2,484 cps	
138Ba (KED)	4.510 ppb	246,553 cps	
139La (KED)	0.287 ppb	30,735 cps	
140Ce (KED)	0.599 ppb	81,596 cps	
141Pr (KED)	0.072 ppb	10,621 cps	
142Nd (KED)	0.372 ppb	21,605 cps	
152Sm (KED)	0.050 ppb	2,640 cps	
153Eu (KED)	0.010 ppb	1,037 cps	
158Gd (KED)	0.047 ppb	3,077 cps	
159Tb (KED)	186.857 %	5,947,712 cps	
164Dy (KED)	0.030 ppb	2,270 cps	
166Er (KED)	0.013 ppb	1,993 cps	
169Tm (KED)	0.002 ppb	577 cps	
174Yb (KED)	0.012 ppb	1,280 cps	
175Lu (KED)	-0.228 ppb	33,760 cps	
205Tl (KED)	0.006 ppb	1,047 cps	
208Pb (KED)	0.770 ppb	103,767 cps	
209Bi (KED)	151.381 %	4,223,274 cps	
232Th (KED)	0.086 ppb	20,914 cps	
238U (KED)	0.024 ppb	6,759 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 16

Analysis name: 23ti

Analysis started at: 10/9/2021 3:54:38 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	230.072 %	
9Be (KED)	0.000 ppb	
11B (KED)	-18.231 ppb	
24Mg (KED)	296.144 ppb	
27Al (KED)	256.878 ppb	
45Sc (KED)	218.429 %	
51V (KED)	0.478 ppb	
52Cr (KED)	2.091 ppb	
55Mn (KED)	7.554 ppb	
56Fe (KED)	286.737 ppb	
58Ni (KED)	1.450 ppb	
59Co (KED)	0.141 ppb	
63Cu (KED)	6.604 ppb	
64Zn (KED)	168.739 ppb	
69Ga (KED)	0.976 ppb	
75As (KED)	0.148 ppb	
80Se (KED)	0.928 ppb	
85Rb (KED)	4.884 ppb	
88Sr (KED)	4.259 ppb	
89Y (KED)	195.127 %	
107Ag (KED)	0.076 ppb	
114Cd (KED)	0.081 ppb	
115In (KED)	182.267 %	
133Cs (KED)	0.047 ppb	
138Ba (KED)	3.824 ppb	
139La (KED)	0.250 ppb	
140Ce (KED)	0.504 ppb	
141Pr (KED)	0.061 ppb	
142Nd (KED)	0.326 ppb	
152Sm (KED)	0.044 ppb	
153Eu (KED)	0.009 ppb	
158Gd (KED)	0.038 ppb	
159Tb (KED)	187.054 %	
164Dy (KED)	0.030 ppb	
166Er (KED)	0.011 ppb	
169Tm (KED)	0.001 ppb	
174Yb (KED)	0.011 ppb	
175Lu (KED)	-0.244 ppb	
205Tl (KED)	0.005 ppb	
208Pb (KED)	0.817 ppb	
209Bi (KED)	154.284 %	
232Th (KED)	0.072 ppb	
238U (KED)	0.021 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	230.072 %	4,978 cps	
9Be (KED)	0.000 ppb	0 cps	
11B (KED)	-18.231 ppb	447 cps	
24Mg (KED)	296.144 ppb	277,446 cps	
27Al (KED)	256.878 ppb	67,921 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	218.429 %	99,684 cps	
51V (KED)	0.478 ppb	6,172 cps	
52Cr (KED)	2.091 ppb	40,412 cps	
55Mn (KED)	7.554 ppb	82,120 cps	
56Fe (KED)	286.737 ppb	5,150,597 cps	
58Ni (KED)	1.450 ppb	31,964 cps	
59Co (KED)	0.141 ppb	5,161 cps	
63Cu (KED)	6.604 ppb	156,576 cps	
64Zn (KED)	168.739 ppb	1,085,529 cps	
69Ga (KED)	0.976 ppb	9,717 cps	
75As (KED)	0.148 ppb	333 cps	
80Se (KED)	0.928 ppb	3,991 cps	
85Rb (KED)	4.884 ppb	47,200 cps	
88Sr (KED)	4.259 ppb	61,341 cps	
89Y (KED)	195.127 %	817,965 cps	
107Ag (KED)	0.076 ppb	4,464 cps	
114Cd (KED)	0.081 ppb	1,853 cps	
115In (KED)	182.267 %	1,374,475 cps	
133Cs (KED)	0.047 ppb	2,100 cps	
138Ba (KED)	3.824 ppb	209,653 cps	
139La (KED)	0.250 ppb	26,869 cps	
140Ce (KED)	0.504 ppb	68,927 cps	
141Pr (KED)	0.061 ppb	9,003 cps	
142Nd (KED)	0.326 ppb	18,948 cps	
152Sm (KED)	0.044 ppb	2,327 cps	
153Eu (KED)	0.009 ppb	1,020 cps	
158Gd (KED)	0.038 ppb	2,550 cps	
159Tb (KED)	187.054 %	5,953,986 cps	
164Dy (KED)	0.030 ppb	2,237 cps	
166Er (KED)	0.011 ppb	1,740 cps	
169Tm (KED)	0.001 ppb	507 cps	
174Yb (KED)	0.011 ppb	1,203 cps	
175Lu (KED)	-0.244 ppb	30,621 cps	
205Tl (KED)	0.005 ppb	843 cps	
208Pb (KED)	0.817 ppb	111,406 cps	
209Bi (KED)	154.284 %	4,304,264 cps	
232Th (KED)	0.072 ppb	17,869 cps	
238U (KED)	0.021 ppb	6,185 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 17

Analysis name: 00061ti

Analysis started at: 10/9/2021 3:57:44 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	231.614 %	
9Be (KED)	0.059 ppb	
11B (KED)	-14.534 ppb	
24Mg (KED)	519.403 ppb	
27Al (KED)	570.196 ppb	
45Sc (KED)	225.837 %	
51V (KED)	0.981 ppb	
52Cr (KED)	2.692 ppb	
55Mn (KED)	16.264 ppb	
56Fe (KED)	568.857 ppb	
58Ni (KED)	2.742 ppb	
59Co (KED)	0.271 ppb	
63Cu (KED)	8.043 ppb	
64Zn (KED)	182.677 ppb	
69Ga (KED)	1.808 ppb	
75As (KED)	0.265 ppb	
80Se (KED)	0.516 ppb	
85Rb (KED)	4.853 ppb	
88Sr (KED)	7.809 ppb	
89Y (KED)	199.991 %	
107Ag (KED)	0.095 ppb	
114Cd (KED)	0.046 ppb	
115In (KED)	183.661 %	
133Cs (KED)	0.099 ppb	
138Ba (KED)	7.531 ppb	
139La (KED)	0.544 ppb	
140Ce (KED)	1.149 ppb	
141Pr (KED)	0.136 ppb	
142Nd (KED)	0.720 ppb	
152Sm (KED)	0.104 ppb	
153Eu (KED)	0.019 ppb	
158Gd (KED)	0.081 ppb	
159Tb (KED)	192.373 %	
164Dy (KED)	0.061 ppb	
166Er (KED)	0.027 ppb	
169Tm (KED)	0.003 ppb	
174Yb (KED)	0.023 ppb	
175Lu (KED)	-0.242 ppb	
205Tl (KED)	0.012 ppb	
208Pb (KED)	0.975 ppb	
209Bi (KED)	156.715 %	
232Th (KED)	0.164 ppb	
238U (KED)	0.032 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	231.614 %	5,011 cps	
9Be (KED)	0.059 ppb	13 cps	
11B (KED)	-14.534 ppb	910 cps	
24Mg (KED)	519.403 ppb	488,939 cps	
27Al (KED)	570.196 ppb	155,438 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	225.837 %	103,064 cps	
51V (KED)	0.981 ppb	13,074 cps	
52Cr (KED)	2.692 ppb	53,658 cps	
55Mn (KED)	16.264 ppb	182,486 cps	
56Fe (KED)	568.857 ppb	10,546,675 cps	
58Ni (KED)	2.742 ppb	61,428 cps	
59Co (KED)	0.271 ppb	10,121 cps	
63Cu (KED)	8.043 ppb	195,105 cps	
64Zn (KED)	182.677 ppb	1,204,191 cps	
69Ga (KED)	1.808 ppb	18,330 cps	
75As (KED)	0.265 ppb	590 cps	
80Se (KED)	0.516 ppb	3,807 cps	
85Rb (KED)	4.853 ppb	48,076 cps	
88Sr (KED)	7.809 ppb	114,787 cps	
89Y (KED)	199.991 %	838,353 cps	
107Ag (KED)	0.095 ppb	5,581 cps	
114Cd (KED)	0.046 ppb	1,090 cps	
115In (KED)	183.661 %	1,384,985 cps	
133Cs (KED)	0.099 ppb	4,374 cps	
138Ba (KED)	7.531 ppb	422,127 cps	
139La (KED)	0.544 ppb	59,656 cps	
140Ce (KED)	1.149 ppb	159,952 cps	
141Pr (KED)	0.136 ppb	20,520 cps	
142Nd (KED)	0.720 ppb	42,750 cps	
152Sm (KED)	0.104 ppb	5,545 cps	
153Eu (KED)	0.019 ppb	2,090 cps	
158Gd (KED)	0.081 ppb	5,455 cps	
159Tb (KED)	192.373 %	6,123,312 cps	
164Dy (KED)	0.061 ppb	4,651 cps	
166Er (KED)	0.027 ppb	3,247 cps	
169Tm (KED)	0.003 ppb	1,097 cps	
174Yb (KED)	0.023 ppb	2,507 cps	
175Lu (KED)	-0.242 ppb	31,884 cps	
205Tl (KED)	0.012 ppb	2,137 cps	
208Pb (KED)	0.975 ppb	132,393 cps	
209Bi (KED)	156.715 %	4,372,095 cps	
232Th (KED)	0.164 ppb	40,780 cps	
238U (KED)	0.032 ppb	9,380 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 18

Analysis name: 00099ti

Analysis started at: 10/9/2021 4:00:25 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	227.452 %	
9Be (KED)	0.045 ppb	
11B (KED)	-15.245 ppb	
24Mg (KED)	924.889 ppb	
27Al (KED)	711.309 ppb	
45Sc (KED)	240.424 %	
51V (KED)	1.223 ppb	
52Cr (KED)	2.390 ppb	
55Mn (KED)	23.072 ppb	
56Fe (KED)	708.542 ppb	
58Ni (KED)	3.162 ppb	
59Co (KED)	0.318 ppb	
63Cu (KED)	10.424 ppb	
64Zn (KED)	165.996 ppb	
69Ga (KED)	2.385 ppb	
75As (KED)	0.353 ppb	
80Se (KED)	0.913 ppb	
85Rb (KED)	9.776 ppb	
88Sr (KED)	11.369 ppb	
89Y (KED)	208.195 %	
107Ag (KED)	0.029 ppb	
114Cd (KED)	0.056 ppb	
115In (KED)	183.810 %	
133Cs (KED)	0.122 ppb	
138Ba (KED)	9.810 ppb	
139La (KED)	0.867 ppb	
140Ce (KED)	1.798 ppb	
141Pr (KED)	0.215 ppb	
142Nd (KED)	1.161 ppb	
152Sm (KED)	0.150 ppb	
153Eu (KED)	0.026 ppb	
158Gd (KED)	0.122 ppb	
159Tb (KED)	197.403 %	
164Dy (KED)	0.085 ppb	
166Er (KED)	0.032 ppb	
169Tm (KED)	0.005 ppb	
174Yb (KED)	0.029 ppb	
175Lu (KED)	-0.238 ppb	
205Tl (KED)	0.014 ppb	
208Pb (KED)	0.909 ppb	
209Bi (KED)	154.243 %	
232Th (KED)	0.280 ppb	
238U (KED)	0.040 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	227.452 %	4,921 cps	
9Be (KED)	0.045 ppb	10 cps	
11B (KED)	-15.245 ppb	807 cps	
24Mg (KED)	924.889 ppb	854,053 cps	
27Al (KED)	711.309 ppb	206,335 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	240.424 %	109,721 cps	
51V (KED)	1.223 ppb	17,349 cps	
52Cr (KED)	2.390 ppb	50,773 cps	
55Mn (KED)	23.072 ppb	275,479 cps	
56Fe (KED)	708.542 ppb	13,980,116 cps	
58Ni (KED)	3.162 ppb	75,210 cps	
59Co (KED)	0.318 ppb	12,646 cps	
63Cu (KED)	10.424 ppb	262,736 cps	
64Zn (KED)	165.996 ppb	1,139,463 cps	
69Ga (KED)	2.385 ppb	25,135 cps	
75As (KED)	0.353 ppb	810 cps	
80Se (KED)	0.913 ppb	4,247 cps	
85Rb (KED)	9.776 ppb	100,766 cps	
88Sr (KED)	11.369 ppb	173,703 cps	
89Y (KED)	208.195 %	872,745 cps	
107Ag (KED)	0.029 ppb	1,707 cps	
114Cd (KED)	0.056 ppb	1,307 cps	
115In (KED)	183.810 %	1,386,109 cps	
133Cs (KED)	0.122 ppb	5,378 cps	
138Ba (KED)	9.810 ppb	563,425 cps	
139La (KED)	0.867 ppb	97,278 cps	
140Ce (KED)	1.798 ppb	256,155 cps	
141Pr (KED)	0.215 ppb	33,064 cps	
142Nd (KED)	1.161 ppb	70,546 cps	
152Sm (KED)	0.150 ppb	8,223 cps	
153Eu (KED)	0.026 ppb	2,917 cps	
158Gd (KED)	0.122 ppb	8,420 cps	
159Tb (KED)	197.403 %	6,283,396 cps	
164Dy (KED)	0.085 ppb	6,625 cps	
166Er (KED)	0.032 ppb	3,834 cps	
169Tm (KED)	0.005 ppb	1,570 cps	
174Yb (KED)	0.029 ppb	3,187 cps	
175Lu (KED)	-0.238 ppb	33,536 cps	
205Tl (KED)	0.014 ppb	2,427 cps	
208Pb (KED)	0.909 ppb	122,432 cps	
209Bi (KED)	154.243 %	4,303,109 cps	
232Th (KED)	0.280 ppb	68,089 cps	
238U (KED)	0.040 ppb	11,355 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 19

Analysis name: 00074ti

Analysis started at: 10/9/2021 4:03:10 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	236.546 %	
9Be (KED)	0.044 ppb	
11B (KED)	-11.671 ppb	
24Mg (KED)	453.464 ppb	
27Al (KED)	429.837 ppb	
45Sc (KED)	244.360 %	
51V (KED)	0.710 ppb	
52Cr (KED)	1.641 ppb	
55Mn (KED)	11.598 ppb	
56Fe (KED)	426.297 ppb	
58Ni (KED)	2.005 ppb	
59Co (KED)	0.194 ppb	
63Cu (KED)	8.810 ppb	
64Zn (KED)	163.314 ppb	
69Ga (KED)	1.565 ppb	
75As (KED)	0.213 ppb	
80Se (KED)	1.533 ppb	
85Rb (KED)	8.074 ppb	
88Sr (KED)	6.068 ppb	
89Y (KED)	206.130 %	
107Ag (KED)	0.047 ppb	
114Cd (KED)	0.055 ppb	
115In (KED)	190.050 %	
133Cs (KED)	0.075 ppb	
138Ba (KED)	5.882 ppb	
139La (KED)	0.444 ppb	
140Ce (KED)	0.885 ppb	
141Pr (KED)	0.107 ppb	
142Nd (KED)	0.564 ppb	
152Sm (KED)	0.073 ppb	
153Eu (KED)	0.014 ppb	
158Gd (KED)	0.064 ppb	
159Tb (KED)	199.162 %	
164Dy (KED)	0.046 ppb	
166Er (KED)	0.018 ppb	
169Tm (KED)	0.002 ppb	
174Yb (KED)	0.018 ppb	
175Lu (KED)	-0.251 ppb	
205Tl (KED)	0.011 ppb	
208Pb (KED)	0.752 ppb	
209Bi (KED)	157.114 %	
232Th (KED)	0.125 ppb	
238U (KED)	0.024 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	236.546 %	5,118 cps	
9Be (KED)	0.044 ppb	10 cps	
11B (KED)	-11.671 ppb	1,293 cps	
24Mg (KED)	453.464 ppb	436,117 cps	
27Al (KED)	429.837 ppb	126,882 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	244.360 %	111,517 cps	
51V (KED)	0.710 ppb	10,238 cps	
52Cr (KED)	1.641 ppb	35,594 cps	
55Mn (KED)	11.598 ppb	140,894 cps	
56Fe (KED)	426.297 ppb	8,556,820 cps	
58Ni (KED)	2.005 ppb	48,956 cps	
59Co (KED)	0.194 ppb	7,869 cps	
63Cu (KED)	8.810 ppb	220,118 cps	
64Zn (KED)	163.314 ppb	1,109,993 cps	
69Ga (KED)	1.565 ppb	16,374 cps	
75As (KED)	0.213 ppb	493 cps	
80Se (KED)	1.533 ppb	4,644 cps	
85Rb (KED)	8.074 ppb	82,406 cps	
88Sr (KED)	6.068 ppb	92,070 cps	
89Y (KED)	206.130 %	864,089 cps	
107Ag (KED)	0.047 ppb	2,860 cps	
114Cd (KED)	0.055 ppb	1,347 cps	
115In (KED)	190.050 %	1,433,169 cps	
133Cs (KED)	0.075 ppb	3,440 cps	
138Ba (KED)	5.882 ppb	341,928 cps	
139La (KED)	0.444 ppb	50,469 cps	
140Ce (KED)	0.885 ppb	127,848 cps	
141Pr (KED)	0.107 ppb	16,711 cps	
142Nd (KED)	0.564 ppb	34,722 cps	
152Sm (KED)	0.073 ppb	4,064 cps	
153Eu (KED)	0.014 ppb	1,610 cps	
158Gd (KED)	0.064 ppb	4,511 cps	
159Tb (KED)	199.162 %	6,339,408 cps	
164Dy (KED)	0.046 ppb	3,624 cps	
166Er (KED)	0.018 ppb	2,580 cps	
169Tm (KED)	0.002 ppb	870 cps	
174Yb (KED)	0.018 ppb	2,040 cps	
175Lu (KED)	-0.251 ppb	31,072 cps	
205Tl (KED)	0.011 ppb	1,880 cps	
208Pb (KED)	0.752 ppb	105,469 cps	
209Bi (KED)	157.114 %	4,383,211 cps	
232Th (KED)	0.125 ppb	31,293 cps	
238U (KED)	0.024 ppb	7,149 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 20

Analysis name: 00078ti

Analysis started at: 10/9/2021 4:06:06 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	244.253 %	
9Be (KED)	0.014 ppb	
11B (KED)	-15.369 ppb	
24Mg (KED)	730.466 ppb	
27Al (KED)	481.227 ppb	
45Sc (KED)	247.610 %	
51V (KED)	0.840 ppb	
52Cr (KED)	1.971 ppb	
55Mn (KED)	15.471 ppb	
56Fe (KED)	475.299 ppb	
58Ni (KED)	2.228 ppb	
59Co (KED)	0.231 ppb	
63Cu (KED)	8.047 ppb	
64Zn (KED)	228.106 ppb	
69Ga (KED)	1.719 ppb	
75As (KED)	0.248 ppb	
80Se (KED)	1.583 ppb	
85Rb (KED)	9.357 ppb	
88Sr (KED)	7.877 ppb	
89Y (KED)	211.028 %	
107Ag (KED)	0.031 ppb	
114Cd (KED)	0.049 ppb	
115In (KED)	192.367 %	
133Cs (KED)	0.087 ppb	
138Ba (KED)	6.871 ppb	
139La (KED)	0.471 ppb	
140Ce (KED)	0.983 ppb	
141Pr (KED)	0.118 ppb	
142Nd (KED)	0.615 ppb	
152Sm (KED)	0.085 ppb	
153Eu (KED)	0.016 ppb	
158Gd (KED)	0.071 ppb	
159Tb (KED)	197.531 %	
164Dy (KED)	0.048 ppb	
166Er (KED)	0.018 ppb	
169Tm (KED)	0.003 ppb	
174Yb (KED)	0.020 ppb	
175Lu (KED)	-0.239 ppb	
205Tl (KED)	0.014 ppb	
208Pb (KED)	0.820 ppb	
209Bi (KED)	154.255 %	
232Th (KED)	0.140 ppb	
238U (KED)	0.028 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	244.253 %	5,284 cps	
9Be (KED)	0.014 ppb	3 cps	
11B (KED)	-15.369 ppb	850 cps	
24Mg (KED)	730.466 ppb	724,618 cps	
27Al (KED)	481.227 ppb	143,894 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	247.610 %	113,001 cps	
51V (KED)	0.840 ppb	12,273 cps	
52Cr (KED)	1.971 ppb	43,205 cps	
55Mn (KED)	15.471 ppb	190,341 cps	
56Fe (KED)	475.299 ppb	9,664,978 cps	
58Ni (KED)	2.228 ppb	54,968 cps	
59Co (KED)	0.231 ppb	9,480 cps	
63Cu (KED)	8.047 ppb	205,973 cps	
64Zn (KED)	228.106 ppb	1,585,704 cps	
69Ga (KED)	1.719 ppb	18,400 cps	
75As (KED)	0.248 ppb	583 cps	
80Se (KED)	1.583 ppb	4,791 cps	
85Rb (KED)	9.357 ppb	97,757 cps	
88Sr (KED)	7.877 ppb	122,165 cps	
89Y (KED)	211.028 %	884,622 cps	
107Ag (KED)	0.031 ppb	1,910 cps	
114Cd (KED)	0.049 ppb	1,220 cps	
115In (KED)	192.367 %	1,450,642 cps	
133Cs (KED)	0.087 ppb	4,027 cps	
138Ba (KED)	6.871 ppb	395,704 cps	
139La (KED)	0.471 ppb	53,096 cps	
140Ce (KED)	0.983 ppb	140,656 cps	
141Pr (KED)	0.118 ppb	18,240 cps	
142Nd (KED)	0.615 ppb	37,527 cps	
152Sm (KED)	0.085 ppb	4,678 cps	
153Eu (KED)	0.016 ppb	1,743 cps	
158Gd (KED)	0.071 ppb	4,954 cps	
159Tb (KED)	197.531 %	6,287,485 cps	
164Dy (KED)	0.048 ppb	3,797 cps	
166Er (KED)	0.018 ppb	2,570 cps	
169Tm (KED)	0.003 ppb	903 cps	
174Yb (KED)	0.020 ppb	2,267 cps	
175Lu (KED)	-0.239 ppb	33,412 cps	
205Tl (KED)	0.014 ppb	2,444 cps	
208Pb (KED)	0.820 ppb	111,795 cps	
209Bi (KED)	154.255 %	4,303,443 cps	
232Th (KED)	0.140 ppb	34,394 cps	
238U (KED)	0.028 ppb	8,019 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 21

Analysis name: 25ti

Analysis started at: 10/9/2021 4:08:57 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	236.546 %	
9Be (KED)	0.029 ppb	
11B (KED)	-13.611 ppb	
24Mg (KED)	881.415 ppb	
27Al (KED)	981.341 ppb	
45Sc (KED)	246.727 %	
51V (KED)	1.707 ppb	
52Cr (KED)	2.334 ppb	
55Mn (KED)	28.699 ppb	
56Fe (KED)	1,005.006 ppb	
58Ni (KED)	4.248 ppb	
59Co (KED)	0.444 ppb	
63Cu (KED)	10.165 ppb	
64Zn (KED)	149.114 ppb	
69Ga (KED)	2.926 ppb	
75As (KED)	0.416 ppb	
80Se (KED)	1.531 ppb	
85Rb (KED)	5.038 ppb	
88Sr (KED)	11.979 ppb	
89Y (KED)	221.292 %	
107Ag (KED)	0.026 ppb	
114Cd (KED)	0.061 ppb	
115In (KED)	193.374 %	
133Cs (KED)	0.172 ppb	
138Ba (KED)	12.270 ppb	
139La (KED)	1.014 ppb	
140Ce (KED)	2.128 ppb	
141Pr (KED)	0.247 ppb	
142Nd (KED)	1.326 ppb	
152Sm (KED)	0.186 ppb	
153Eu (KED)	0.035 ppb	
158Gd (KED)	0.157 ppb	
159Tb (KED)	200.449 %	
164Dy (KED)	0.107 ppb	
166Er (KED)	0.047 ppb	
169Tm (KED)	0.006 ppb	
174Yb (KED)	0.040 ppb	
175Lu (KED)	-0.248 ppb	
205Tl (KED)	0.014 ppb	
208Pb (KED)	1.153 ppb	
209Bi (KED)	155.325 %	
232Th (KED)	0.369 ppb	
238U (KED)	0.054 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	236.546 %	5,118 cps	
9Be (KED)	0.029 ppb	7 cps	
11B (KED)	-13.611 ppb	1,047 cps	
24Mg (KED)	881.415 ppb	846,511 cps	
27Al (KED)	981.341 ppb	291,980 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	246.727 %	112,598 cps	
51V (KED)	1.707 ppb	24,845 cps	
52Cr (KED)	2.334 ppb	50,900 cps	
55Mn (KED)	28.699 ppb	351,576 cps	
56Fe (KED)	1,005.006 ppb	20,341,080 cps	
58Ni (KED)	4.248 ppb	103,233 cps	
59Co (KED)	0.444 ppb	18,060 cps	
63Cu (KED)	10.165 ppb	272,362 cps	
64Zn (KED)	149.114 ppb	1,088,366 cps	
69Ga (KED)	2.926 ppb	32,740 cps	
75As (KED)	0.416 ppb	1,010 cps	
80Se (KED)	1.531 ppb	4,984 cps	
85Rb (KED)	5.038 ppb	55,219 cps	
88Sr (KED)	11.979 ppb	194,493 cps	
89Y (KED)	221.292 %	927,645 cps	
107Ag (KED)	0.026 ppb	1,627 cps	
114Cd (KED)	0.061 ppb	1,510 cps	
115In (KED)	193.374 %	1,458,236 cps	
133Cs (KED)	0.172 ppb	7,946 cps	
138Ba (KED)	12.270 ppb	714,917 cps	
139La (KED)	1.014 ppb	115,495 cps	
140Ce (KED)	2.128 ppb	307,649 cps	
141Pr (KED)	0.247 ppb	38,530 cps	
142Nd (KED)	1.326 ppb	81,788 cps	
152Sm (KED)	0.186 ppb	10,351 cps	
153Eu (KED)	0.035 ppb	3,907 cps	
158Gd (KED)	0.157 ppb	10,965 cps	
159Tb (KED)	200.449 %	6,380,353 cps	
164Dy (KED)	0.107 ppb	8,436 cps	
166Er (KED)	0.047 ppb	5,314 cps	
169Tm (KED)	0.006 ppb	2,114 cps	
174Yb (KED)	0.040 ppb	4,427 cps	
175Lu (KED)	-0.248 ppb	31,764 cps	
205Tl (KED)	0.014 ppb	2,474 cps	
208Pb (KED)	1.153 ppb	152,811 cps	
209Bi (KED)	155.325 %	4,333,298 cps	
232Th (KED)	0.369 ppb	90,252 cps	
238U (KED)	0.054 ppb	15,350 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 22

Analysis name: 22-12ti

Analysis started at: 10/9/2021 4:11:30 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	243.945 %	
9Be (KED)	0.028 ppb	
11B (KED)	-12.742 ppb	
24Mg (KED)	979.500 ppb	
27Al (KED)	1,287.424 ppb	
45Sc (KED)	249.606 %	
51V (KED)	2.114 ppb	
52Cr (KED)	3.198 ppb	
55Mn (KED)	33.088 ppb	
56Fe (KED)	1,207.287 ppb	
58Ni (KED)	5.343 ppb	
59Co (KED)	0.499 ppb	
63Cu (KED)	12.754 ppb	
64Zn (KED)	164.779 ppb	
69Ga (KED)	3.718 ppb	
75As (KED)	0.461 ppb	
80Se (KED)	1.251 ppb	
85Rb (KED)	6.208 ppb	
88Sr (KED)	13.970 ppb	
89Y (KED)	218.966 %	
107Ag (KED)	0.020 ppb	
114Cd (KED)	0.048 ppb	
115In (KED)	200.557 %	
133Cs (KED)	0.203 ppb	
138Ba (KED)	15.360 ppb	
139La (KED)	1.291 ppb	
140Ce (KED)	2.683 ppb	
141Pr (KED)	0.320 ppb	
142Nd (KED)	1.636 ppb	
152Sm (KED)	0.222 ppb	
153Eu (KED)	0.043 ppb	
158Gd (KED)	0.183 ppb	
159Tb (KED)	203.032 %	
164Dy (KED)	0.138 ppb	
166Er (KED)	0.065 ppb	
169Tm (KED)	0.009 ppb	
174Yb (KED)	0.052 ppb	
175Lu (KED)	-0.250 ppb	
205Tl (KED)	0.016 ppb	
208Pb (KED)	1.387 ppb	
209Bi (KED)	156.369 %	
232Th (KED)	0.370 ppb	
238U (KED)	0.067 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	243.945 %	5,278 cps	
9Be (KED)	0.028 ppb	7 cps	
11B (KED)	-12.742 ppb	1,193 cps	
24Mg (KED)	979.500 ppb	969,990 cps	
27Al (KED)	1,287.424 ppb	387,394 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	249.606 %	113,912 cps	
51V (KED)	2.114 ppb	31,122 cps	
52Cr (KED)	3.198 ppb	70,348 cps	
55Mn (KED)	33.088 ppb	410,022 cps	
56Fe (KED)	1,207.287 ppb	24,716,204 cps	
58Ni (KED)	5.343 ppb	131,005 cps	
59Co (KED)	0.499 ppb	20,544 cps	
63Cu (KED)	12.754 ppb	337,672 cps	
64Zn (KED)	164.779 ppb	1,189,652 cps	
69Ga (KED)	3.718 ppb	41,121 cps	
75As (KED)	0.461 ppb	1,103 cps	
80Se (KED)	1.251 ppb	4,721 cps	
85Rb (KED)	6.208 ppb	67,318 cps	
88Sr (KED)	13.970 ppb	224,331 cps	
89Y (KED)	218.966 %	917,895 cps	
107Ag (KED)	0.020 ppb	1,297 cps	
114Cd (KED)	0.048 ppb	1,247 cps	
115In (KED)	200.557 %	1,512,398 cps	
133Cs (KED)	0.203 ppb	9,680 cps	
138Ba (KED)	15.360 ppb	905,790 cps	
139La (KED)	1.291 ppb	148,802 cps	
140Ce (KED)	2.683 ppb	392,485 cps	
141Pr (KED)	0.320 ppb	50,609 cps	
142Nd (KED)	1.636 ppb	102,123 cps	
152Sm (KED)	0.222 ppb	12,476 cps	
153Eu (KED)	0.043 ppb	4,858 cps	
158Gd (KED)	0.183 ppb	12,903 cps	
159Tb (KED)	203.032 %	6,462,580 cps	
164Dy (KED)	0.138 ppb	11,078 cps	
166Er (KED)	0.065 ppb	7,022 cps	
169Tm (KED)	0.009 ppb	2,820 cps	
174Yb (KED)	0.052 ppb	5,838 cps	
175Lu (KED)	-0.250 ppb	31,778 cps	
205Tl (KED)	0.016 ppb	2,827 cps	
208Pb (KED)	1.387 ppb	182,416 cps	
209Bi (KED)	156.369 %	4,362,436 cps	
232Th (KED)	0.370 ppb	91,229 cps	
238U (KED)	0.067 ppb	19,025 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 23

Analysis name: 7ti

Analysis started at: 10/9/2021 4:14:06 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	247.336 %	
9Be (KED)	0.042 ppb	
11B (KED)	-16.603 ppb	
24Mg (KED)	890.255 ppb	
27Al (KED)	968.574 ppb	
45Sc (KED)	251.088 %	
51V (KED)	1.677 ppb	
52Cr (KED)	2.938 ppb	
55Mn (KED)	26.772 ppb	
56Fe (KED)	960.329 ppb	
58Ni (KED)	3.984 ppb	
59Co (KED)	0.426 ppb	
63Cu (KED)	8.181 ppb	
64Zn (KED)	182.438 ppb	
69Ga (KED)	3.015 ppb	
75As (KED)	0.385 ppb	
80Se (KED)	1.440 ppb	
85Rb (KED)	6.443 ppb	
88Sr (KED)	11.775 ppb	
89Y (KED)	219.028 %	
107Ag (KED)	0.025 ppb	
114Cd (KED)	0.070 ppb	
115In (KED)	203.248 %	
133Cs (KED)	0.167 ppb	
138Ba (KED)	12.330 ppb	
139La (KED)	1.073 ppb	
140Ce (KED)	2.200 ppb	
141Pr (KED)	0.256 ppb	
142Nd (KED)	1.335 ppb	
152Sm (KED)	0.186 ppb	
153Eu (KED)	0.035 ppb	
158Gd (KED)	0.151 ppb	
159Tb (KED)	202.629 %	
164Dy (KED)	0.114 ppb	
166Er (KED)	0.053 ppb	
169Tm (KED)	0.006 ppb	
174Yb (KED)	0.039 ppb	
175Lu (KED)	-0.247 ppb	
205Tl (KED)	0.015 ppb	
208Pb (KED)	1.092 ppb	
209Bi (KED)	160.121 %	
232Th (KED)	0.309 ppb	
238U (KED)	0.053 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	247.336 %	5,351 cps	
9Be (KED)	0.042 ppb	10 cps	
11B (KED)	-16.603 ppb	697 cps	
24Mg (KED)	890.255 ppb	893,986 cps	
27Al (KED)	968.574 ppb	293,279 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	251.088 %	114,588 cps	
51V (KED)	1.677 ppb	24,848 cps	
52Cr (KED)	2.938 ppb	65,062 cps	
55Mn (KED)	26.772 ppb	333,783 cps	
56Fe (KED)	960.329 ppb	19,781,225 cps	
58Ni (KED)	3.984 ppb	98,612 cps	
59Co (KED)	0.426 ppb	17,656 cps	
63Cu (KED)	8.181 ppb	217,297 cps	
64Zn (KED)	182.438 ppb	1,317,104 cps	
69Ga (KED)	3.015 ppb	33,378 cps	
75As (KED)	0.385 ppb	927 cps	
80Se (KED)	1.440 ppb	4,864 cps	
85Rb (KED)	6.443 ppb	69,886 cps	
88Sr (KED)	11.775 ppb	189,234 cps	
89Y (KED)	219.028 %	918,157 cps	
107Ag (KED)	0.025 ppb	1,637 cps	
114Cd (KED)	0.070 ppb	1,810 cps	
115In (KED)	203.248 %	1,532,693 cps	
133Cs (KED)	0.167 ppb	8,066 cps	
138Ba (KED)	12.330 ppb	726,207 cps	
139La (KED)	1.073 ppb	123,470 cps	
140Ce (KED)	2.200 ppb	321,438 cps	
141Pr (KED)	0.256 ppb	40,389 cps	
142Nd (KED)	1.335 ppb	83,227 cps	
152Sm (KED)	0.186 ppb	10,428 cps	
153Eu (KED)	0.035 ppb	3,911 cps	
158Gd (KED)	0.151 ppb	10,691 cps	
159Tb (KED)	202.629 %	6,449,753 cps	
164Dy (KED)	0.114 ppb	9,157 cps	
166Er (KED)	0.053 ppb	5,875 cps	
169Tm (KED)	0.006 ppb	2,140 cps	
174Yb (KED)	0.039 ppb	4,347 cps	
175Lu (KED)	-0.247 ppb	32,429 cps	
205Tl (KED)	0.015 ppb	2,590 cps	
208Pb (KED)	1.092 ppb	149,957 cps	
209Bi (KED)	160.121 %	4,467,099 cps	
232Th (KED)	0.309 ppb	77,990 cps	
238U (KED)	0.053 ppb	15,530 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 24

Analysis name: 6ti

Analysis started at: 10/9/2021 4:16:35 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	256.275 %	
9Be (KED)	0.027 ppb	
11B (KED)	-16.350 ppb	
24Mg (KED)	826.162 ppb	
27Al (KED)	877.755 ppb	
45Sc (KED)	259.808 %	
51V (KED)	1.552 ppb	
52Cr (KED)	2.157 ppb	
55Mn (KED)	27.268 ppb	
56Fe (KED)	944.402 ppb	
58Ni (KED)	4.317 ppb	
59Co (KED)	0.411 ppb	
63Cu (KED)	9.355 ppb	
64Zn (KED)	167.823 ppb	
69Ga (KED)	3.006 ppb	
75As (KED)	0.414 ppb	
80Se (KED)	1.676 ppb	
85Rb (KED)	5.641 ppb	
88Sr (KED)	12.268 ppb	
89Y (KED)	224.183 %	
107Ag (KED)	0.019 ppb	
114Cd (KED)	0.068 ppb	
115In (KED)	199.876 %	
133Cs (KED)	0.153 ppb	
138Ba (KED)	12.540 ppb	
139La (KED)	1.270 ppb	
140Ce (KED)	2.514 ppb	
141Pr (KED)	0.290 ppb	
142Nd (KED)	1.551 ppb	
152Sm (KED)	0.181 ppb	
153Eu (KED)	0.035 ppb	
158Gd (KED)	0.157 ppb	
159Tb (KED)	207.577 %	
164Dy (KED)	0.104 ppb	
166Er (KED)	0.051 ppb	
169Tm (KED)	0.006 ppb	
174Yb (KED)	0.038 ppb	
175Lu (KED)	-0.255 ppb	
205Tl (KED)	0.013 ppb	
208Pb (KED)	1.231 ppb	
209Bi (KED)	162.198 %	
232Th (KED)	0.349 ppb	
238U (KED)	0.052 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	256.275 %	5,545 cps	
9Be (KED)	0.027 ppb	7 cps	
11B (KED)	-16.350 ppb	757 cps	
24Mg (KED)	826.162 ppb	859,708 cps	
27Al (KED)	877.755 ppb	275,049 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	259.808 %	118,567 cps	
51V (KED)	1.552 ppb	23,786 cps	
52Cr (KED)	2.157 ppb	49,578 cps	
55Mn (KED)	27.268 ppb	351,763 cps	
56Fe (KED)	944.402 ppb	20,129,095 cps	
58Ni (KED)	4.317 ppb	110,434 cps	
59Co (KED)	0.411 ppb	17,609 cps	
63Cu (KED)	9.355 ppb	254,075 cps	
64Zn (KED)	167.823 ppb	1,240,426 cps	
69Ga (KED)	3.006 ppb	34,063 cps	
75As (KED)	0.414 ppb	1,017 cps	
80Se (KED)	1.676 ppb	5,161 cps	
85Rb (KED)	5.641 ppb	62,634 cps	
88Sr (KED)	12.268 ppb	201,768 cps	
89Y (KED)	224.183 %	939,766 cps	
107Ag (KED)	0.019 ppb	1,243 cps	
114Cd (KED)	0.068 ppb	1,713 cps	
115In (KED)	199.876 %	1,507,260 cps	
133Cs (KED)	0.153 ppb	7,302 cps	
138Ba (KED)	12.540 ppb	756,591 cps	
139La (KED)	1.270 ppb	149,661 cps	
140Ce (KED)	2.514 ppb	376,125 cps	
141Pr (KED)	0.290 ppb	46,918 cps	
142Nd (KED)	1.551 ppb	98,992 cps	
152Sm (KED)	0.181 ppb	10,401 cps	
153Eu (KED)	0.035 ppb	3,991 cps	
158Gd (KED)	0.157 ppb	11,342 cps	
159Tb (KED)	207.577 %	6,607,260 cps	
164Dy (KED)	0.104 ppb	8,543 cps	
166Er (KED)	0.051 ppb	5,878 cps	
169Tm (KED)	0.006 ppb	2,154 cps	
174Yb (KED)	0.038 ppb	4,377 cps	
175Lu (KED)	-0.255 ppb	31,413 cps	
205Tl (KED)	0.013 ppb	2,297 cps	
208Pb (KED)	1.231 ppb	169,401 cps	
209Bi (KED)	162.198 %	4,525,057 cps	
232Th (KED)	0.349 ppb	89,319 cps	
238U (KED)	0.052 ppb	15,620 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 25

Analysis name: 19ti

Analysis started at: 10/9/2021 4:19:06 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	242.865 %	
9Be (KED)	0.028 ppb	
11B (KED)	-10.072 ppb	
24Mg (KED)	549.038 ppb	
27Al (KED)	564.704 ppb	
45Sc (KED)	250.874 %	
51V (KED)	0.969 ppb	
52Cr (KED)	2.524 ppb	
55Mn (KED)	16.771 ppb	
56Fe (KED)	590.825 ppb	
58Ni (KED)	2.930 ppb	
59Co (KED)	0.287 ppb	
63Cu (KED)	11.902 ppb	
64Zn (KED)	143.424 ppb	
69Ga (KED)	1.960 ppb	
75As (KED)	0.311 ppb	
80Se (KED)	1.611 ppb	
85Rb (KED)	4.231 ppb	
88Sr (KED)	7.784 ppb	
89Y (KED)	229.902 %	
107Ag (KED)	0.034 ppb	
114Cd (KED)	0.099 ppb	
115In (KED)	201.983 %	
133Cs (KED)	0.103 ppb	
138Ba (KED)	8.440 ppb	
139La (KED)	0.624 ppb	
140Ce (KED)	1.325 ppb	
141Pr (KED)	0.155 ppb	
142Nd (KED)	0.797 ppb	
152Sm (KED)	0.102 ppb	
153Eu (KED)	0.022 ppb	
158Gd (KED)	0.086 ppb	
159Tb (KED)	203.584 %	
164Dy (KED)	0.061 ppb	
166Er (KED)	0.031 ppb	
169Tm (KED)	0.003 ppb	
174Yb (KED)	0.023 ppb	
175Lu (KED)	-0.252 ppb	
205Tl (KED)	0.011 ppb	
208Pb (KED)	1.108 ppb	
209Bi (KED)	164.722 %	
232Th (KED)	0.217 ppb	
238U (KED)	0.034 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	242.865 %	5,254 cps	
9Be (KED)	0.028 ppb	7 cps	
11B (KED)	-10.072 ppb	1,537 cps	
24Mg (KED)	549.038 ppb	541,869 cps	
27Al (KED)	564.704 ppb	171,011 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	250.874 %	114,490 cps	
51V (KED)	0.969 ppb	14,342 cps	
52Cr (KED)	2.524 ppb	55,915 cps	
55Mn (KED)	16.771 ppb	209,023 cps	
56Fe (KED)	590.825 ppb	12,167,542 cps	
58Ni (KED)	2.930 ppb	72,826 cps	
59Co (KED)	0.287 ppb	11,929 cps	
63Cu (KED)	11.902 ppb	330,998 cps	
64Zn (KED)	143.424 ppb	1,087,730 cps	
69Ga (KED)	1.960 ppb	22,831 cps	
75As (KED)	0.311 ppb	790 cps	
80Se (KED)	1.611 ppb	5,241 cps	
85Rb (KED)	4.231 ppb	48,190 cps	
88Sr (KED)	7.784 ppb	131,530 cps	
89Y (KED)	229.902 %	963,740 cps	
107Ag (KED)	0.034 ppb	2,244 cps	
114Cd (KED)	0.099 ppb	2,487 cps	
115In (KED)	201.983 %	1,523,152 cps	
133Cs (KED)	0.103 ppb	5,004 cps	
138Ba (KED)	8.440 ppb	500,325 cps	
139La (KED)	0.624 ppb	72,316 cps	
140Ce (KED)	1.325 ppb	195,022 cps	
141Pr (KED)	0.155 ppb	24,668 cps	
142Nd (KED)	0.797 ppb	50,041 cps	
152Sm (KED)	0.102 ppb	5,795 cps	
153Eu (KED)	0.022 ppb	2,540 cps	
158Gd (KED)	0.086 ppb	6,115 cps	
159Tb (KED)	203.584 %	6,480,168 cps	
164Dy (KED)	0.061 ppb	4,904 cps	
166Er (KED)	0.031 ppb	3,874 cps	
169Tm (KED)	0.003 ppb	1,153 cps	
174Yb (KED)	0.023 ppb	2,654 cps	
175Lu (KED)	-0.252 ppb	31,460 cps	
205Tl (KED)	0.011 ppb	2,034 cps	
208Pb (KED)	1.108 ppb	156,246 cps	
209Bi (KED)	164.722 %	4,595,472 cps	
232Th (KED)	0.217 ppb	56,538 cps	
238U (KED)	0.034 ppb	10,381 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 26

Analysis name: 00090ti

Analysis started at: 10/9/2021 4:21:40 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	261.671 %	
9Be (KED)	0.013 ppb	
11B (KED)	-17.435 ppb	
24Mg (KED)	382.108 ppb	
27Al (KED)	355.988 ppb	
45Sc (KED)	257.499 %	
51V (KED)	0.656 ppb	
52Cr (KED)	1.812 ppb	
55Mn (KED)	10.721 ppb	
56Fe (KED)	357.773 ppb	
58Ni (KED)	1.884 ppb	
59Co (KED)	0.163 ppb	
63Cu (KED)	8.232 ppb	
64Zn (KED)	175.739 ppb	
69Ga (KED)	1.384 ppb	
75As (KED)	0.204 ppb	
80Se (KED)	1.469 ppb	
85Rb (KED)	3.944 ppb	
88Sr (KED)	5.835 ppb	
89Y (KED)	224.149 %	
107Ag (KED)	0.015 ppb	
114Cd (KED)	0.042 ppb	
115In (KED)	208.039 %	
133Cs (KED)	0.059 ppb	
138Ba (KED)	5.775 ppb	
139La (KED)	0.338 ppb	
140Ce (KED)	0.696 ppb	
141Pr (KED)	0.081 ppb	
142Nd (KED)	0.445 ppb	
152Sm (KED)	0.063 ppb	
153Eu (KED)	0.012 ppb	
158Gd (KED)	0.052 ppb	
159Tb (KED)	212.684 %	
164Dy (KED)	0.040 ppb	
166Er (KED)	0.014 ppb	
169Tm (KED)	0.002 ppb	
174Yb (KED)	0.015 ppb	
175Lu (KED)	-0.253 ppb	
205Tl (KED)	0.010 ppb	
208Pb (KED)	0.741 ppb	
209Bi (KED)	167.181 %	
232Th (KED)	0.108 ppb	
238U (KED)	0.022 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	261.671 %	5,661 cps	
9Be (KED)	0.013 ppb	3 cps	
11B (KED)	-17.435 ppb	620 cps	
24Mg (KED)	382.108 ppb	406,743 cps	
27Al (KED)	355.988 ppb	110,804 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	257.499 %	117,514 cps	
51V (KED)	0.656 ppb	9,981 cps	
52Cr (KED)	1.812 ppb	41,365 cps	
55Mn (KED)	10.721 ppb	137,256 cps	
56Fe (KED)	357.773 ppb	7,570,915 cps	
58Ni (KED)	1.884 ppb	48,541 cps	
59Co (KED)	0.163 ppb	6,989 cps	
63Cu (KED)	8.232 ppb	223,768 cps	
64Zn (KED)	175.739 ppb	1,298,552 cps	
69Ga (KED)	1.384 ppb	15,770 cps	
75As (KED)	0.204 ppb	517 cps	
80Se (KED)	1.469 ppb	5,001 cps	
85Rb (KED)	3.944 ppb	43,800 cps	
88Sr (KED)	5.835 ppb	96,298 cps	
89Y (KED)	224.149 %	939,623 cps	
107Ag (KED)	0.015 ppb	1,050 cps	
114Cd (KED)	0.042 ppb	1,140 cps	
115In (KED)	208.039 %	1,568,819 cps	
133Cs (KED)	0.059 ppb	2,974 cps	
138Ba (KED)	5.775 ppb	358,558 cps	
139La (KED)	0.338 ppb	41,191 cps	
140Ce (KED)	0.696 ppb	107,582 cps	
141Pr (KED)	0.081 ppb	13,541 cps	
142Nd (KED)	0.445 ppb	29,334 cps	
152Sm (KED)	0.063 ppb	3,747 cps	
153Eu (KED)	0.012 ppb	1,410 cps	
158Gd (KED)	0.052 ppb	3,891 cps	
159Tb (KED)	212.684 %	6,769,809 cps	
164Dy (KED)	0.040 ppb	3,384 cps	
166Er (KED)	0.014 ppb	2,337 cps	
169Tm (KED)	0.002 ppb	940 cps	
174Yb (KED)	0.015 ppb	1,870 cps	
175Lu (KED)	-0.253 ppb	32,653 cps	
205Tl (KED)	0.010 ppb	1,887 cps	
208Pb (KED)	0.741 ppb	110,748 cps	
209Bi (KED)	167.181 %	4,664,069 cps	
232Th (KED)	0.108 ppb	28,947 cps	
238U (KED)	0.022 ppb	6,862 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 27

Analysis name: 00070ti

Analysis started at: 10/9/2021 4:24:01 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	265.678 %	
9Be (KED)	0.013 ppb	
11B (KED)	-15.167 ppb	
24Mg (KED)	795.805 ppb	
27Al (KED)	650.631 ppb	
45Sc (KED)	265.707 %	
51V (KED)	1.103 ppb	
52Cr (KED)	1.891 ppb	
55Mn (KED)	18.206 ppb	
56Fe (KED)	643.503 ppb	
58Ni (KED)	2.889 ppb	
59Co (KED)	0.273 ppb	
63Cu (KED)	9.896 ppb	
64Zn (KED)	159.324 ppb	
69Ga (KED)	2.104 ppb	
75As (KED)	0.313 ppb	
80Se (KED)	1.244 ppb	
85Rb (KED)	11.704 ppb	
88Sr (KED)	8.752 ppb	
89Y (KED)	230.802 %	
107Ag (KED)	0.021 ppb	
114Cd (KED)	0.043 ppb	
115In (KED)	202.334 %	
133Cs (KED)	0.114 ppb	
138Ba (KED)	8.527 ppb	
139La (KED)	0.587 ppb	
140Ce (KED)	1.172 ppb	
141Pr (KED)	0.140 ppb	
142Nd (KED)	0.745 ppb	
152Sm (KED)	0.107 ppb	
153Eu (KED)	0.020 ppb	
158Gd (KED)	0.091 ppb	
159Tb (KED)	216.489 %	
164Dy (KED)	0.064 ppb	
166Er (KED)	0.027 ppb	
169Tm (KED)	0.004 ppb	
174Yb (KED)	0.024 ppb	
175Lu (KED)	-0.253 ppb	
205Tl (KED)	0.013 ppb	
208Pb (KED)	0.940 ppb	
209Bi (KED)	163.065 %	
232Th (KED)	0.183 ppb	
238U (KED)	0.034 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	265.678 %	5,748 cps	
9Be (KED)	0.013 ppb	3 cps	
11B (KED)	-15.167 ppb	953 cps	
24Mg (KED)	795.805 ppb	858,553 cps	
27Al (KED)	650.631 ppb	208,618 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	265.707 %	121,260 cps	
51V (KED)	1.103 ppb	17,295 cps	
52Cr (KED)	1.891 ppb	44,516 cps	
55Mn (KED)	18.206 ppb	240,300 cps	
56Fe (KED)	643.503 ppb	14,034,054 cps	
58Ni (KED)	2.889 ppb	76,051 cps	
59Co (KED)	0.273 ppb	12,019 cps	
63Cu (KED)	9.896 ppb	276,597 cps	
64Zn (KED)	159.324 ppb	1,212,583 cps	
69Ga (KED)	2.104 ppb	24,598 cps	
75As (KED)	0.313 ppb	800 cps	
80Se (KED)	1.244 ppb	4,971 cps	
85Rb (KED)	11.704 ppb	133,720 cps	
88Sr (KED)	8.752 ppb	148,389 cps	
89Y (KED)	230.802 %	967,513 cps	
107Ag (KED)	0.021 ppb	1,357 cps	
114Cd (KED)	0.043 ppb	1,130 cps	
115In (KED)	202.334 %	1,525,799 cps	
133Cs (KED)	0.114 ppb	5,535 cps	
138Ba (KED)	8.527 ppb	537,519 cps	
139La (KED)	0.587 ppb	72,386 cps	
140Ce (KED)	1.172 ppb	183,620 cps	
141Pr (KED)	0.140 ppb	23,616 cps	
142Nd (KED)	0.745 ppb	49,773 cps	
152Sm (KED)	0.107 ppb	6,452 cps	
153Eu (KED)	0.020 ppb	2,440 cps	
158Gd (KED)	0.091 ppb	6,922 cps	
159Tb (KED)	216.489 %	6,890,908 cps	
164Dy (KED)	0.064 ppb	5,455 cps	
166Er (KED)	0.027 ppb	3,644 cps	
169Tm (KED)	0.004 ppb	1,437 cps	
174Yb (KED)	0.024 ppb	2,944 cps	
175Lu (KED)	-0.253 ppb	33,221 cps	
205Tl (KED)	0.013 ppb	2,397 cps	
208Pb (KED)	0.940 ppb	133,388 cps	
209Bi (KED)	163.065 %	4,549,232 cps	
232Th (KED)	0.183 ppb	47,350 cps	
238U (KED)	0.034 ppb	10,208 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 28

Analysis name: 00098ti

Analysis started at: 10/9/2021 4:26:30 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	252.730 %	
9Be (KED)	0.027 ppb	
11B (KED)	-15.782 ppb	
24Mg (KED)	638.688 ppb	
27Al (KED)	518.310 ppb	
45Sc (KED)	264.209 %	
51V (KED)	0.902 ppb	
52Cr (KED)	2.291 ppb	
55Mn (KED)	14.963 ppb	
56Fe (KED)	519.059 ppb	
58Ni (KED)	2.469 ppb	
59Co (KED)	0.240 ppb	
63Cu (KED)	9.147 ppb	
64Zn (KED)	165.802 ppb	
69Ga (KED)	1.711 ppb	
75As (KED)	0.234 ppb	
80Se (KED)	1.206 ppb	
85Rb (KED)	8.591 ppb	
88Sr (KED)	7.073 ppb	
89Y (KED)	231.908 %	
107Ag (KED)	0.027 ppb	
114Cd (KED)	0.052 ppb	
115In (KED)	206.109 %	
133Cs (KED)	0.097 ppb	
138Ba (KED)	7.321 ppb	
139La (KED)	0.519 ppb	
140Ce (KED)	1.055 ppb	
141Pr (KED)	0.128 ppb	
142Nd (KED)	0.676 ppb	
152Sm (KED)	0.094 ppb	
153Eu (KED)	0.016 ppb	
158Gd (KED)	0.076 ppb	
159Tb (KED)	210.154 %	
164Dy (KED)	0.056 ppb	
166Er (KED)	0.024 ppb	
169Tm (KED)	0.004 ppb	
174Yb (KED)	0.020 ppb	
175Lu (KED)	-0.252 ppb	
205Tl (KED)	0.012 ppb	
208Pb (KED)	0.843 ppb	
209Bi (KED)	164.183 %	
232Th (KED)	0.155 ppb	
238U (KED)	0.031 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	252.730 %	5,468 cps	
9Be (KED)	0.027 ppb	7 cps	
11B (KED)	-15.782 ppb	823 cps	
24Mg (KED)	638.688 ppb	655,733 cps	
27Al (KED)	518.310 ppb	165,340 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	264.209 %	120,576 cps	
51V (KED)	0.902 ppb	14,068 cps	
52Cr (KED)	2.291 ppb	53,505 cps	
55Mn (KED)	14.963 ppb	196,446 cps	
56Fe (KED)	519.059 ppb	11,260,412 cps	
58Ni (KED)	2.469 ppb	64,848 cps	
59Co (KED)	0.240 ppb	10,514 cps	
63Cu (KED)	9.147 ppb	257,036 cps	
64Zn (KED)	165.802 ppb	1,267,765 cps	
69Ga (KED)	1.711 ppb	20,123 cps	
75As (KED)	0.234 ppb	607 cps	
80Se (KED)	1.206 ppb	4,964 cps	
85Rb (KED)	8.591 ppb	98,646 cps	
88Sr (KED)	7.073 ppb	120,628 cps	
89Y (KED)	231.908 %	972,148 cps	
107Ag (KED)	0.027 ppb	1,823 cps	
114Cd (KED)	0.052 ppb	1,380 cps	
115In (KED)	206.109 %	1,554,267 cps	
133Cs (KED)	0.097 ppb	4,818 cps	
138Ba (KED)	7.321 ppb	448,365 cps	
139La (KED)	0.519 ppb	62,175 cps	
140Ce (KED)	1.055 ppb	160,607 cps	
141Pr (KED)	0.128 ppb	21,071 cps	
142Nd (KED)	0.676 ppb	43,837 cps	
152Sm (KED)	0.094 ppb	5,475 cps	
153Eu (KED)	0.016 ppb	1,950 cps	
158Gd (KED)	0.076 ppb	5,581 cps	
159Tb (KED)	210.154 %	6,689,263 cps	
164Dy (KED)	0.056 ppb	4,691 cps	
166Er (KED)	0.024 ppb	3,234 cps	
169Tm (KED)	0.004 ppb	1,293 cps	
174Yb (KED)	0.020 ppb	2,314 cps	
175Lu (KED)	-0.252 ppb	32,550 cps	
205Tl (KED)	0.012 ppb	2,200 cps	
208Pb (KED)	0.843 ppb	121,868 cps	
209Bi (KED)	164.183 %	4,580,425 cps	
232Th (KED)	0.155 ppb	40,446 cps	
238U (KED)	0.031 ppb	9,537 cps	

# Comprehensive

10/9/2021 4:31:46 PM

## Sample Summary

Instrument ID: iCAP Q

Analysis index: 29

Analysis name: 5ti

Analysis started at: 10/9/2021 4:28:53 PM

User name: WINDOWS-UPCI4ER\Administrator

Category	Concentration average	Concentration RSD
6Li (KED)	267.065 %	
9Be (KED)	0.039 ppb	
11B (KED)	-16.270 ppb	
24Mg (KED)	702.396 ppb	
27Al (KED)	777.818 ppb	
45Sc (KED)	274.605 %	
51V (KED)	1.410 ppb	
52Cr (KED)	3.317 ppb	
55Mn (KED)	22.093 ppb	
56Fe (KED)	771.655 ppb	
58Ni (KED)	3.586 ppb	
59Co (KED)	0.335 ppb	
63Cu (KED)	9.871 ppb	
64Zn (KED)	157.443 ppb	
69Ga (KED)	2.433 ppb	
75As (KED)	0.365 ppb	
80Se (KED)	1.507 ppb	
85Rb (KED)	4.596 ppb	
88Sr (KED)	9.896 ppb	
89Y (KED)	237.115 %	
107Ag (KED)	0.018 ppb	
114Cd (KED)	0.044 ppb	
115In (KED)	205.941 %	
133Cs (KED)	0.142 ppb	
138Ba (KED)	10.405 ppb	
139La (KED)	0.807 ppb	
140Ce (KED)	1.706 ppb	
141Pr (KED)	0.202 ppb	
142Nd (KED)	1.042 ppb	
152Sm (KED)	0.146 ppb	
153Eu (KED)	0.030 ppb	
158Gd (KED)	0.123 ppb	
159Tb (KED)	208.906 %	
164Dy (KED)	0.088 ppb	
166Er (KED)	0.038 ppb	
169Tm (KED)	0.005 ppb	
174Yb (KED)	0.035 ppb	
175Lu (KED)	-0.255 ppb	
205Tl (KED)	0.012 ppb	
208Pb (KED)	1.200 ppb	
209Bi (KED)	164.696 %	
232Th (KED)	0.244 ppb	
238U (KED)	0.046 ppb	

Category	Concentration average	Intensity average	Intensity RSD
6Li (KED)	267.065 %	5,778 cps	
9Be (KED)	0.039 ppb	10 cps	
11B (KED)	-16.270 ppb	800 cps	
24Mg (KED)	702.396 ppb	761,903 cps	
27Al (KED)	777.818 ppb	257,664 cps	

# Comprehensive

10/9/2021 4:31:46 PM

Category	Concentration average	Intensity average	Intensity RSD
45Sc (KED)	274.605 %	125,320 cps	
51V (KED)	1.410 ppb	22,848 cps	
52Cr (KED)	3.317 ppb	80,250 cps	
55Mn (KED)	22.093 ppb	301,297 cps	
56Fe (KED)	771.655 ppb	17,387,975 cps	
58Ni (KED)	3.586 ppb	97,207 cps	
59Co (KED)	0.335 ppb	15,216 cps	
63Cu (KED)	9.871 ppb	283,440 cps	
64Zn (KED)	157.443 ppb	1,231,093 cps	
69Ga (KED)	2.433 ppb	29,197 cps	
75As (KED)	0.365 ppb	953 cps	
80Se (KED)	1.507 ppb	5,321 cps	
85Rb (KED)	4.596 ppb	53,983 cps	
88Sr (KED)	9.896 ppb	172,284 cps	
89Y (KED)	237.115 %	993,976 cps	
107Ag (KED)	0.018 ppb	1,213 cps	
114Cd (KED)	0.044 ppb	1,183 cps	
115In (KED)	205.941 %	1,553,002 cps	
133Cs (KED)	0.142 ppb	6,959 cps	
138Ba (KED)	10.405 ppb	632,243 cps	
139La (KED)	0.807 ppb	95,888 cps	
140Ce (KED)	1.706 ppb	257,243 cps	
141Pr (KED)	0.202 ppb	32,837 cps	
142Nd (KED)	1.042 ppb	67,080 cps	
152Sm (KED)	0.146 ppb	8,476 cps	
153Eu (KED)	0.030 ppb	3,504 cps	
158Gd (KED)	0.123 ppb	8,947 cps	
159Tb (KED)	208.906 %	6,649,550 cps	
164Dy (KED)	0.088 ppb	7,282 cps	
166Er (KED)	0.038 ppb	4,661 cps	
169Tm (KED)	0.005 ppb	1,883 cps	
174Yb (KED)	0.035 ppb	4,027 cps	
175Lu (KED)	-0.255 ppb	31,677 cps	
205Tl (KED)	0.012 ppb	2,230 cps	
208Pb (KED)	1.200 ppb	168,027 cps	
209Bi (KED)	164.696 %	4,594,739 cps	
232Th (KED)	0.244 ppb	63,592 cps	
238U (KED)	0.046 ppb	13,941 cps	