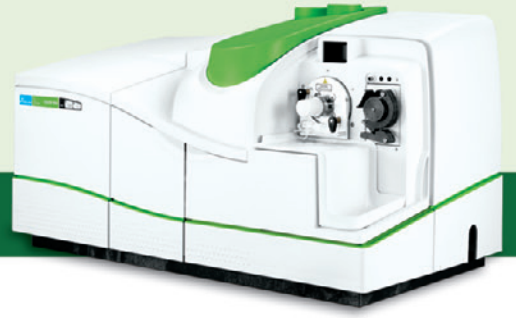
Do Things The Way You Want

The NexION® Series of ICP-Mass Spectrometers



NexION 300Q Detection Limit
NexION 300S Detection Limit
(in Class 100 clean room)

Se — Atomic Symbol
80 — Isotopic Abundance
Most Abundant Isotope

Detection Limit Ranges

- < 0.1 ppt
- 0.1-1 ppt
- 1-10 ppt
- 10-100 ppt
- 0.1-1 ppb
- 1-10 ppb

H 1																	He 4
Li 7	Be 9											B 11	C 12	N 14	O 16	F 19	Ne 20
Na 23	Mg 24											Al 27	Si 28	P 31	S 32	Cl 35	Ar 40
K 39	Ca 40	Sc 45	Ti 48	V 51	Cr 52	Mn 55	Fe 56	Co 59	Ni 58	Cu 63	Zn 64	Ga 69	Ge 74	As 75	Se 80	Br 79	Kr 84
Rb 85	Sr 88	Y 89	Zr 90	Nb 93	Mo 98	Tc 99	Ru 102	Rh 103	Pd 106	Ag 107	Cd 114	In 115	Sn 120	Sb 121	Te 130	I 127	Xe 132
Cs 133	Ba 138	La 139	Hf 180	Ta 181	W 184	Re 187	Os 192	Ir 193	Pt 195	Au 197	Hg 202	Tl 205	Pb 208	Bi 209	Po	At	Rn
Fr	Ra	Ac															

Ce 140	Pr 141	Nd 142	Pm	Sm 152	Eu 153	Gd 158	Tb 159	Dy 164	Ho 165	Er 166	Tm 169	Yb 174	Lu 175
Th 232	Pa 231	U 238	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

PerkinElmer®
For the Better

Relative Abundance of the Natural Isotopes

Isotope		%		%		%
1	H	99.985				
2	H	0.015				
3			He	0.00137		
4			He	99.999863		
5						
6					Li	7.25
7					Li	92.5
8						
9	Be	100				
10			B	19.9		
11			B	80.1		
12					C	98.90
13					C	1.10
14	N	99.643				
15	N	0.366				
16			O	99.762		
17			O	0.038		
18			O	0.200		
19					F	100
20	Ne	90.48				
21	Ne	0.27				
22	Ne	9.25				
23			Na	100		
24					Mg	78.99
25					Mg	10.00
26					Mg	11.01
27	Al	100				
28			Si	92.23		
29			Si	4.67		
30			Si	3.10		
31					P	100
32	S	95.02				
33	S	0.75				
34	S	4.21				
35			Cl	75.77		
36	S	0.02			Ar	0.337
37			Cl	24.23		
38					Ar	0.063
39	K	93.2581				
40	K	0.0117	Ca	96.941	Ar	99.600
41	K	6.7302				
42			Ca	0.647		
43			Ca	0.135		
44			Ca	2.086		
45					Sc	100
46	Ti	8.0	Ca	0.004		
47	Ti	7.3				
48	Ti	73.8	Ca	0.187		
49	Ti	5.5				
50	Ti	5.4	V	0.250	Cr	4.345
51			V	99.750		
52					Cr	83.789
53					Cr	9.501
54	Fe	5.8			Cr	2.365
55			Mn	100		
56	Fe	91.72				
57	Fe	2.2				
58	Fe	0.28			Ni	68.077
59			Co	100		
60					Ni	26.23

Isotope		%		%		%
61					Ni	1.140
62					Ni	3.634
63	Cu	69.17				
64			Zn	48.6	Ni	0.926
65	Cu	30.83				
66			Zn	27.9		
67			Zn	4.1		
68			Zn	18.8		
69					Ga	60.108
70	Ge	21.23	Zn	0.6		
71					Ga	39.892
72	Ge	27.66				
73	Ge	7.73				
74	Ge	35.94	Se	0.89		
75					As	100
76	Ge	7.44	Se	9.36		
77			Se	7.63		
78	Kr	0.35	Se	23.78		
79					Br	50.69
80	Kr	2.25	Se	49.61		
81					Br	49.31
82	Kr	11.6	Se	8.73		
83	Kr	11.5				
84	Kr	57.0	Sr	0.56		
85					Rb	72.165
86	Kr	17.3	Sr	9.86		
87			Sr	7.00	Rb	27.835
88			Sr	82.58		
89					Y	100
90	Zr	51.45				
91	Zr	11.22				
92	Zr	17.15	Mo	14.84		
93					Nb	100
94	Zr	17.38	Mo	9.25		
95			Mo	15.92		
96	Zr	2.80	Mo	16.68	Ru	5.52
97			Mo	9.55		
98			Mo	24.13	Ru	1.88
99					Ru	12.7
100			Mo	9.63	Ru	12.6
101					Ru	17.0
102	Pd	1.02			Ru	31.6
103			Rh	100		
104	Pd	11.14			Ru	18.7
105	Pd	22.33				
106	Pd	27.33	Cd	1.25		
107					Ag	51.839
108	Pd	26.46	Cd	0.89		
109					Ag	48.161
110	Pd	11.72	Cd	12.49		
111			Cd	12.80		
112	Sn	0.97	Cd	24.13		
113			Cd	12.22	In	4.3
114	Sn	0.65	Cd	28.73		
115	Sn	0.34			In	95.7
116	Sn	14.53	Cd	7.49		
117	Sn	7.68				
118	Sn	24.23				
119	Sn	8.59				
120	Sn	32.59	Te	0.096		

Isotope		%		%		%
121					Sb	57.36
122	Sn	4.63	Te	2.603		
123			Te	0.908	Sb	42.64
124	Sn	5.79	Te	4.816	Xe	0.10
125			Te	7.139		
126			Te	18.95	Xe	0.09
127	I	100				
128			Te	31.69	Xe	1.91
129					Xe	26.4
130	Ba	0.106	Te	33.80	Xe	4.1
131					Xe	21.2
132	Ba	0.101			Xe	26.9
133			Cs	100		
134	Ba	2.417			Xe	10.4
135	Ba	6.592				
136	Ba	7.854	Ce	0.19	Xe	8.9
137	Ba	11.23				
138	Ba	71.70	Ce	0.25	La	0.0902
139					La	99.9098
140			Ce	88.48		
141					Pr	100
142	Nd	27.13	Ce	11.08		
143	Nd	12.18				
144	Nd	23.80	Sm	3.1		
145	Nd	8.30				
146	Nd	17.19				
147			Sm	15.0		
148	Nd	5.76	Sm	11.3		
149			Sm	13.8		
150	Nd	5.64	Sm	7.4		
151					Eu	47.8
152	Gd	0.20	Sm	26.7		
153					Eu	52.2
154	Gd	2.18	Sm	22.7		
155	Gd	14.80				
156	Gd	20.47	Dy	0.06		
157	Gd	15.65				
158	Gd	24.84	Dy	0.10		
159					Tb	100
160	Gd	21.86	Dy	2.34		
161			Dy	18.9		
162	Er	0.14	Dy	25.5		
163			Dy	24.9		
164	Er	1.61	Dy	28.2		
165					Ho	100
166	Er	33.6				
167	Er	22.95				
168	Er	26.8	Yb	0.13		
169					Tm	100
170	Er	14.9	Yb	3.05		
171			Yb	14.3		
172			Yb	21.9		
173			Yb	16.12		
174			Yb	31.8	Hf	0.162
175	Lu	97.41				
176	Lu	2.59	Yb	12.7	Hf	5.206
177					Hf	18.606
178					Hf	27.297
179					Hf	13.629
180	Ta	0.012	W	0.13	Hf	35.100

Isotope		%		%		%
181	Ta	99.988				
182			W	26.3		
183			W	14.3		
184	Os	0.02	W	30.67		
185					Re	37.40
186	Os	1.58	W	28.6		
187	Os	1.6			Re	62.60
188	Os	13.3				
189	Os	16.1				
190	Os	26.4			Pt	0.01
191			Ir	37.3		
192	Os	41.0			Pt	0.79
193			Ir	62.7		
194					Pt	32.9
195					Pt	33.8
196	Hg	0.15			Pt	25.3
197			Au	100		
198	Hg	9.97			Pt	7.2
199	Hg	16.87				
200	Hg	23.10				
201	Hg	13.18				
202	Hg	29.86				
203					Tl	29.524
204	Hg	6.87	Pb	1.4		
205					Tl	70.476
206			Pb	24.1		
207			Pb	22.1		
208			Pb	52.4		
209	Bi	100				
210						
211						
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220						
221						
222						
223						
224						
225						
226						
227						
228						
229						
230						
231	Pa	100				
232	Th	100				
233						
234	U	0.0055				
235	U	0.7200				
236						
237						
238	U	99.2745				

"Isotopic Compositions of the Elements 1989," Pure Appl. Chem., Vol. 63, No. 7, pp. 991-1002, 1991. ©1991 IUPAC.

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