LABTEST ICP-OES

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- @ehsan.dashti

specifications

Our ICP-OES-EOP systems are up to 25X more sensitive than SPECTRO ICP GREEN, ARCOS or BLUE with DSOI or SOP configurations.

* Based on Spectro Ametek application report ICP-153 and ICP-152

TRITON
APPLIED REEF BIOSCIENCE

DSOI / SOP / EOP COMPARISON

Element	λ [nm]	OTHER ICP DSOI LOD (3σ) [µg/L]	OTHER ICP SOP LOD (3σ) [µg/L]	TRITON ICP EOP LOD (3σ) [µg/L]	Element	λ [nm]	OTHER ICP DSOI LOD (3σ) [µg/L]	OTHER ICP SOP LOD (3σ) [µg/L]	TRITON ICP EOP LOD (3σ) [µg/L]
Ag	328.068	0.61	1.3	0.2	In	158.637	0.30	0.40	0.1
Ag	338.289	1.8	3.8	1.0	K	766.491	16	37	0.7
Al	167.078	0.06	0.10	0.03	K	769.896	23	52	1.1
Al	396.152	3.3	7.0	1.2	Li	670.780	0.78	1.9	0.03
As	189.042	1.7	2.7	0.98	Mg	279.553	0.03	0.05	0.02
As	193.759	2.0	3.2	1.3	Mg	285.213	0.22	0.50	0.1
B	249.773	0.35	0.6	0.3	Mn	259.373	0.08	0.16	0.06
Ba	455.404	0.14	0.30	0.06	Mo	202.095	0.40	0.72	0.2
Be	313.042	0.02		0.01	Mo	281.615	1.1	2.1	0.7
Bi	223.061	2.6	5.7	1.9	Na	588.995	5.2	15	0.6
Br	154.065	11	18	18	Na	589.592	5.2	11	0.4
Br	163.340	46	80	92	Ni	221.648	0.45	0.80	0.2
Ca	317.933	1.2	1.8	0.6	Ni	231.604	0.64	1.1	0.4
Ca	396.847	0.13	0.20	0.09	P	177.495	1.2	1.5	0.7
Cd	214.438	0.12	0.17	0.07	P	178.287	1.8	2.4	1.2
Cd	226.502	0.19	0.30	0.1	Pb	168.215	2.3	2.5	0.9
Cd	228.802	0.24	0.40	0.2	Pb	220.353	2.6	4.1	1.5
Cl	134.724	34	35	20	Sb	217.581	1.8	3.6	1.8
Cl	135.165	79	85	39	Sb	206.833	1.5	2.7	0.9
Co	228.616	0.44	0.74	0.2	Se	196.090	3.1	5.1	1.8
Cr	205.618	0.24	0.41	0.2	Se	204.050	6.1	9.0	3.6
Cr	267.716	0.46	0.81	0.3	Si	251.612	0.98	1.5	1.7
Cu	324.754	0.54	1.2	0.3	Si	288.158	2.5	3.9	1.4
Cu	327.396	1.1	2.4	0.6	Sn	147.516	3.1	4.2	0.4
Fe	259.941	0.38	0.70	0.2	Sn	189.991	0.74	1.1	0.02
Ga	294.364	4.0	8.5	2.2	Sr	407.771	0.04	0.08	0.04
Ga	141.444	1.2	1.4	0.5	Sr	421.552	0.09	0.20	3.9
Ge	164.919	1.1	1.6	0.7	Te	170.000	4.6	6.2	0.8
Hg	184.950	0.53	0.70	0.5	Tl	190.864	1.9	2.9	7.6
Hg	194.227	0.70	1.1	0.5	V	292.464	0.87	1.7	0.5
I	142.549	26	37	10	V	311.071	0.52	1.0	0.3
I	161.760	15	23	13	Zn	206.200	0.29	0.37	0.1
I	178.276	3.2	4.6	2.0	Zn	213.856	0.11	0.18	0.05

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DSOI / SOP / EOP COMPARISON

Element	EOP sensitivity increase when compared to DSOI
Na	13 x more sensitive
Mg	1.5 x more sensitive
Ca	1.44 x more sensitive
K	22.85 x more sensitive
Sr	Same sensitivity
Li	26x more sensitive
B	1.16x more sensitive
Al	2x more sensitive
Sn	37x more sensitive
Co	2.2x more sensitive
I	1.6x more sensitive
P	1.7x more sensitive
Ni	2.25x more sensitive
Pb	2.55x more sensitive
Sb	Same sensitivity
Mo	2x more sensitive
Ag	1,8x more sensitive
In	3x more sensitive
As	1.7x more sensitive
Be	2x more sensitive
Ba	2.3x more sensitive
Cd	1.7x more sensitive
Cu	1.8x more sensitive
Fe	1.9x more sensitive
Te	5.75x more sensitive
V	1.7x more sensitive
Se	1.7x more sensitive
Mn	1.3x more sensitive
Zn	2.9x more sensitive

* Based on Spectro Ametek application report ICP-153 and ICP-152

REFERENCES

* https://www.spectro.com/products/~/link.aspx?_id=21E3F67B60F04E8186032A70A0CE071A&_z=z
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