analytikjena
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IDL ICP-OES Range Analytik Jena

Instrument Detection Limits – PlasmaQuant 9200 Series*

3σ LOD in $\mu g L^{-1}$; 10 seconds integration time; automatic baseline fitting (ABC); [1]concentric; [2]ultrasonic nebulization; [3]hydride system

* Limits of detection will vary with respect to sample matrices. In case of spectral interferences as e.g. for rare earth elements, refractory metals, petrochemicals ect. The effective limits of detection of the PlasmaQuant 9200 Elite exceed that of the PlasmaQuant 9200 (due to the higher spectral resolution of the PlasmaQuant 9200 Elite).

Element	Line/nm	radial[1]	axial	
			conc.[1]	USN[2]
Ag	328.068	0.6	0.088	0.0084
Al	396.152	3.0	0.22	0.029
As	193.696	10	1.0 (0.02)[3]	0.21
Au	242.795	1.0	0.14	0.032
B	249.773	1.0	0.059	-
Ba	455.403	0.06	0.0027	0.00074
Bi	223.061	9.0	0.45 (0.03)[3]	0.093
Br	163.283	-	404	-
Ca	393.366	0.01	0.0038	0.0038
Cd	226.502	0.2	0.029	0.0063
Ce	413.380	3.0	0.46	0.024
Cl	894.806	-	1434	535
Co	238.892	0.7	0.082	0.0093
Cr	267.716	0.4	0.051	0.0063
Cs	894.347	20	2.0	0.28
Cu	324.754	0.5	0.087	0.0133
Dy	353.170	0.6	0.047	0.0047
Er	337.271	1.0	0.094	0.0065
Eu	381.967	0.2	0.018	0.0021
Fe	259.940	0.4	0.075	0.0072

Element	Line/nm	radial[1]	axial	
			conc.[1]	USN[2]
Ga	417.204	5.0	0.31	0.038
Gd	342.247	0.8	0.069	0.005
Ge	265.117	4.0	0.48 (0.02)[3]	0.18
Hf	277.336	1.0	0.13	0.045
Hg	194.159	5.0	0.45 (0.003)[3]	0.11
Ho	345.600	2.0	0.11	0.0047
I	178.218	200	3.0	-
In	230.605	10	1.4	0.119
Ir	224.268	3.0	0.29	0.069
K	766.491	5.0	0.28	0.028
La	403.169	0.8	0.065	0.0064
Li	670.791	1.0	0.005	0.0011
Lu	261.542	0.9	0.0073	0.00077
Mg	279.553	0.01	0.0007	0.0007
Mn	257.610	0.05	0.01	0.0018
Mo	202.030	2.0	0.16	0.046
Na	589.590	2.0	0.046	0.058
Nb	316.340	1.0	0.15	0.052
Nd	401.225	2.0	0.2	0.01
Ni	221.648	0.6	0.097	0.013

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Version: 01.19
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Element	Line/nm	radial[1]	axial	
			conc.[1]	USN[2]
P	177.434	30	1.2	0.65
Pb	220.353	4.0	0.45	0.085
Pd	340.485	3.0	0.38	0.064
Pr	390.841	5.0	0.38	0.046
Pt	214.424	4.0	0.54	0.13
Rb	780.030	10	1.0	0.11
Re	227.525	4.0	0.26	0.11
Rh	233.477	4.0	0.3	0.11
Ru	240.272	2.0	0.14	0.038
S	180.669	30	1.1	0.65
Sb	217.581	10	0.85 (0.02)[3]	0.22
Sc	361.383	0.1	0.0073	0.0007
Se	196.026	10	1.1 (0.02)[3]	0.8
Si	251.611	1.0	0.22	0.14
Sm	359.260	2.0	0.26	0.022
Sn	189.930	3.0	0.27	0.13
Sr	407.771	0.02	0.0014	0.0004
Ta	238.706	3.0	0.26	0.078
Tb	350.917	3.0	0.19	0.016
Te	214.281	7.0	0.92 (0.03)[3]	0.2
Th	283.730	6.0	0.14	0.047
Ti	334.941	0.3	0.03	0.012
Tl	190.796	10	0.73	0.094
Tm	313.126	0.4	0.078	0.0092
U	385.957	10	1.0	0.1
V	292.402	0.7	0.062	0.007
W	207.911	3.0	0.24	0.091

Element	Line/nm	radial[1]	axial	
			conc.[1]	USN[2]
Y	371.030	0.1	0.012	0.0014
Yb	328.937	0.1	0.0062	0.00058
Zn	213.856	0.3	0.042	0.0067
Zr	343.823	0.3	0.037	0.01

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