

GeoChem Getting Started Guide

- (1) Check your instrument window: Is the correct window installed? Is it intact? Clean it with an alcohol/wet wipe.
- (2) Shoot your quartz blank; it should come back with no elements except Si & LE (right). If it reports any other elements (after cleaning) replace the window.
- (3) Check your Test Times (below). 30 seconds per beam is a good starting place. Beam 3 is generally not needed. Increases test times if lower limits of detection are needed. Test times can be optimized based upon the elements measured in each beam.
- (4) Confirm that your collimator is turned off (if present on your instrument).
- (5) You can customize the order in which the instrument displays the elements or sort by concentration or atomic number (back page)
- (6) Confirm that PseudoElements, UserFactors, and Compounds are turned off, unless needed (back page).

El	PPM	+/-
Si	49.75%	0.12
LE	50.25%	0.12

< LOD

El	PPM	+/- 3σ
Mg	ND	<4600
Al	ND	<1100
P	ND	<110
S	ND	<120
K	ND	<210

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M-Series:
Prolene



C-Series:
Kapton Mesh



L-Series: Kapton
("Kap 50")

Test Times

Beam	Min	Max
Beam1	0	30
Beam2	0	30

Enable Beam 3

←

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Element Suite - GeoChem(3)

Beam 1: 40.0 kV
Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Rb, Sr, Y, Zr, Nb, Mo, Ag, Cd, Sn, Sb, Ba, W, Hg, Pb, Bi, Th, U, LE

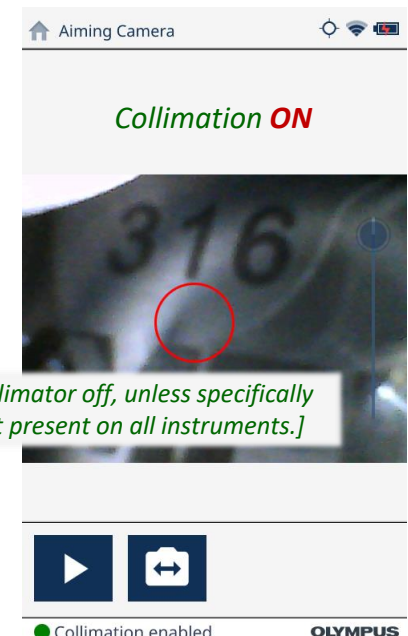
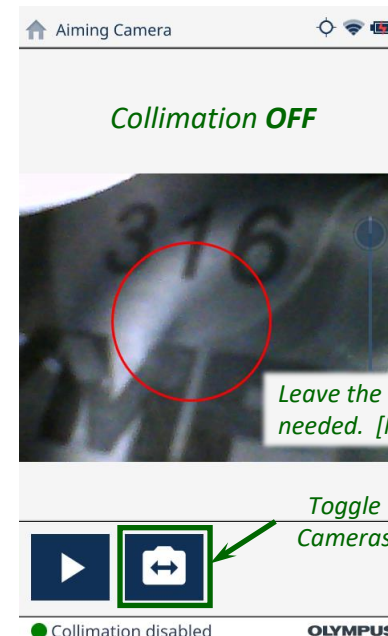
Beam 2: 10.0 kV
Mg, Al, Si, P, S, K, Ca, Ti, Mn

Beam 3: 50.0 kV
Ag, Cd, Sn, Sb, Ba, La, Ce, Pr, Nd, LE

← ?

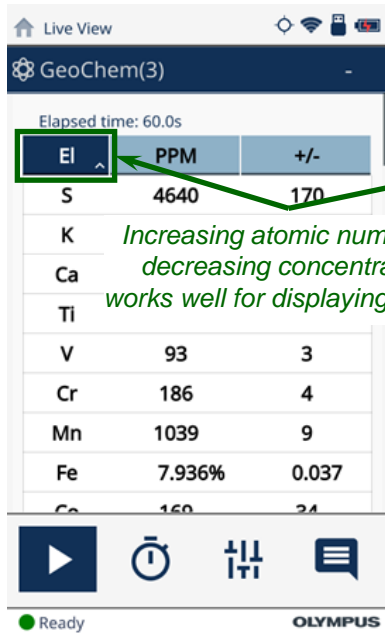
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Beam 3 is optional and not needed for most testing situations.



Leave the collimator off, unless specifically needed. [Not present on all instruments.]

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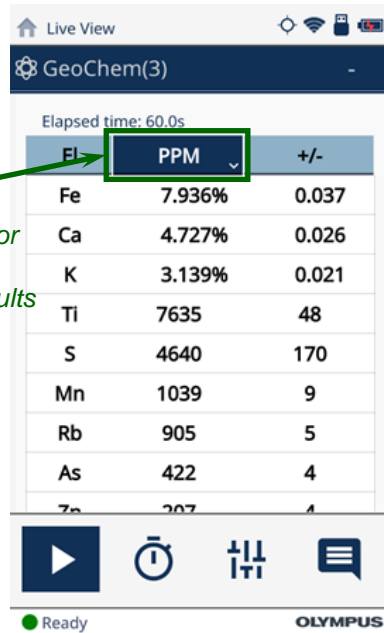


Live View
GeoChem(3)
Elapsed time: 60.0s

El	PPM	+/-
S	4640	170
K		
Ca		
Ti		
V	93	3
Cr	186	4
Mn	1039	9
Fe	7.936%	0.037
Cu	160	24

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Increasing atomic number or decreasing concentration works well for displaying results

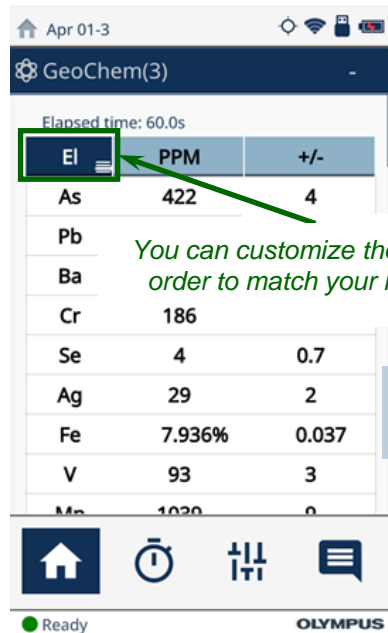


Live View
GeoChem(3)
Elapsed time: 60.0s

El	PPM	+/-
Fe	7.936%	0.037
Ca	4.727%	0.026
K	3.139%	0.021
Ti	7635	48
S	4640	170
Mn	1039	9
Rb	905	5
As	422	4
Zn	207	4

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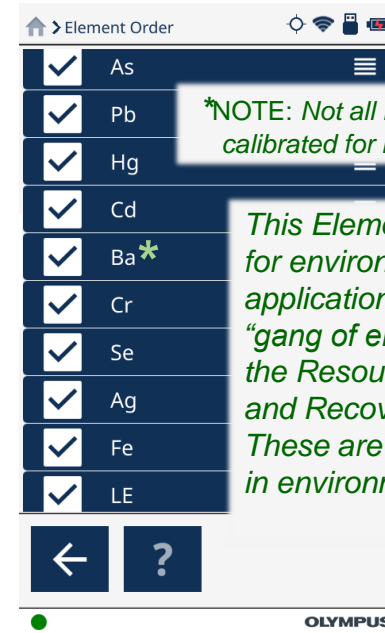
You can customize the element order to match your interests



Apr 01-3
GeoChem(3)
Elapsed time: 60.0s

El	PPM	+/-
As	422	4
Pb		
Ba		
Cr	186	
Se	4	0.7
Ag	29	2
Fe	7.936%	0.037
V	93	3
Mn	1039	9

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Element Order

- As
- Pb
- Hg
- Cd
- Ba*
- Cr
- Se
- Ag
- Fe
- LE

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*NOTE: Not all instruments are calibrated for Ba by default.

This Element Order is ideal for environmental applications. It prioritizes the "gang of eight" as outlined by the Resource Conservation and Recovery Act (RCRA). These are the usual suspects in environmental testing.

Additional Online Resources:



[A Quickstart Guide for Best Practices](#)



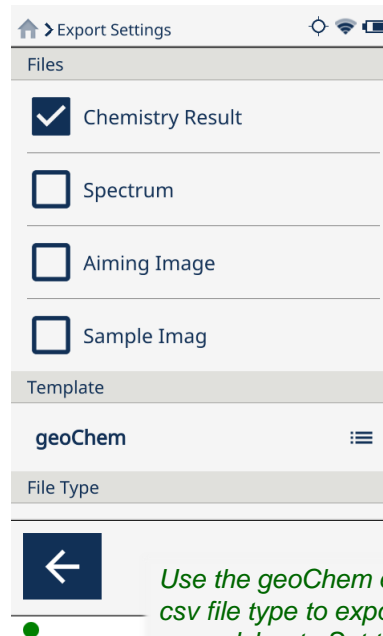
[Vanta GeoChem Technical Tutorial Series](#)



[Techniques for Rapid and Accurate Sample Analysis in the Field](#)



[Using the Vanta to Assess Contaminated Land](#)



Export Settings

Files

- Chemistry Result
- Spectrum
- Aiming Image
- Sample Imag

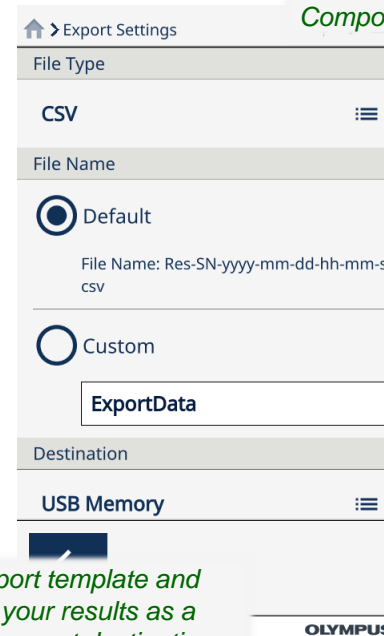
Template

geoChem

File Type

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Use the geoChem export template and csv file type to export your results as a spreadsheet. Set the export destination to the USB memory..



Export Settings

File Type

CSV

File Name

Default

File Name: Res-SN-yyyy-mm-dd-hh-mm-ss.csv

Custom

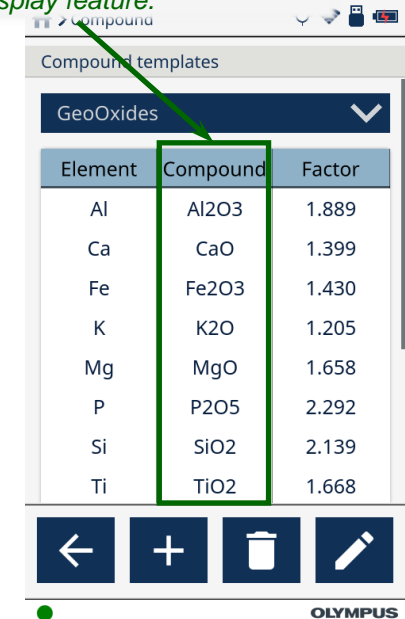
ExportData

Destination

USB Memory

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Elements can be set to be displayed as their common oxides using the Compound Display feature.



Compound Display

Compound templates

GeoOxides

Element	Compound	Factor
Al	Al2O3	1.889
Ca	CaO	1.399
Fe	Fe2O3	1.430
K	K2O	1.205
Mg	MgO	1.658
P	P2O5	2.292
Si	SiO2	2.139
Ti	TiO2	1.668

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