



# Micro X-ray Fluorescence Spectroscopy

Micro X-ray fluorescence spectrometry (Micro-XRF) is a method of choice for the elemental analysis of gold-bearing rocks, as the instrument can be used to pinpoint gold particles down to **1  $\mu\text{m}$  in size!** The on-the-fly elemental maps enables the quick identification of gold and the associated pathfinder elements.



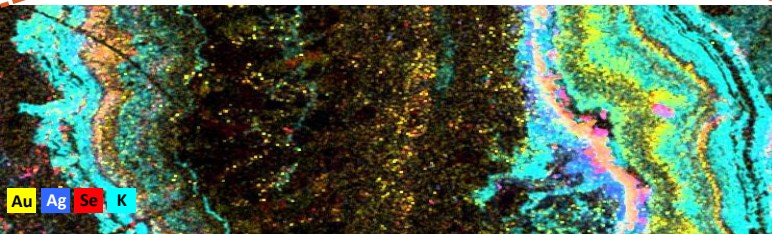
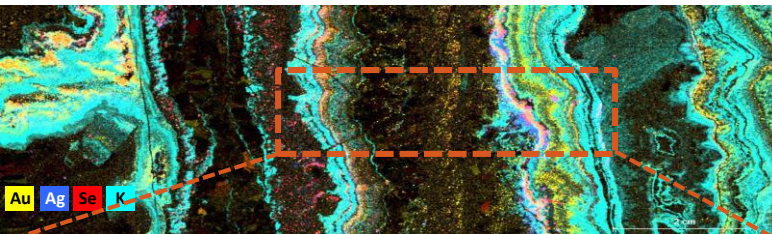
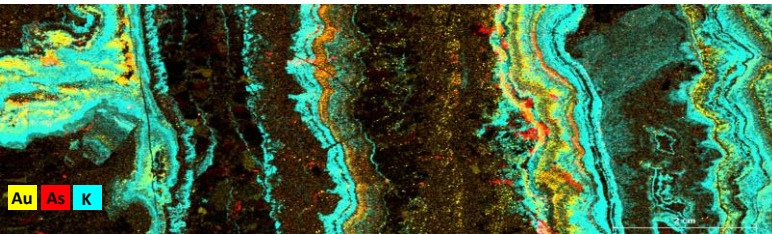
## HIGHLIGHTS

- Non destructive
- No sample prep
- Fast analysis
- PPM detection limits
- Resolution of 25  $\mu\text{m}$
- Qualitative and quantitative analysis

The **M4 TORNADO** is a versatile instrument for fast and accurate high-resolution analysis of both small and large specimens.

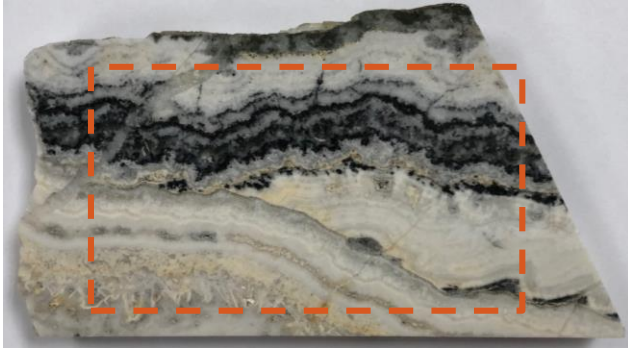
*See more than  
the naked eye!*

**Figure 1:** Gold-bearing vein, with banded silica and calcite, highlighting the association of As, Se and Cu with the Au. Image from Tharalson et al. (in press).

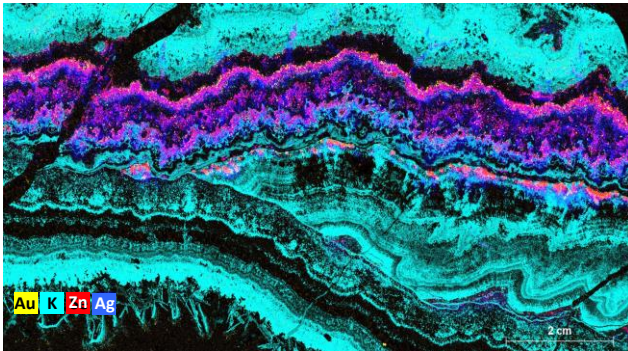




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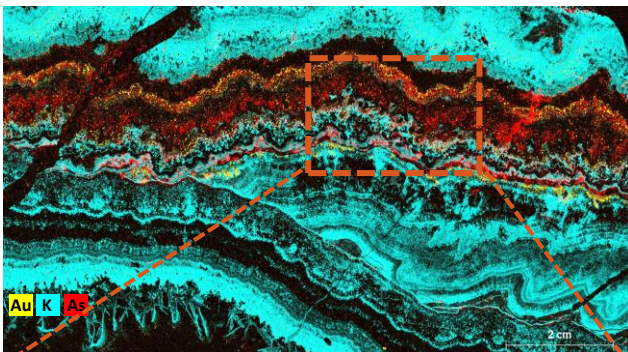


Customisable spot sizes down to **25 μm** means that pathfinder elements and small-scale textural and compositional features can be identified, including those that may not be visibly discernible enabling the delineation of **mineral associations**, fluid pathways and ultimately the paragenesis of samples.

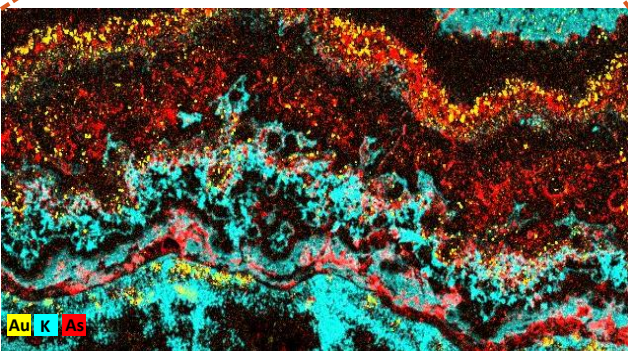


## KNOW MORE!

- Mineral identification
- Mineral abundance
- Mineral properties
- Element distribution
- Element relationship
- Locating minerals
- Fluid pathway
- Paragenesis
- Process



***Bruker M4 Tornado**  
brings sample details  
to you with ease.*



## YOUR PROJECT SAMPLES...

- Thin sections
- Mill control
- Production control
- Drill cores
- Drill chips
- Etc. etc. etc...

**Figure 2:** Gold-bearing vein, with banded silica and adularia ( $KAlSi_3O_8$ ) highlighting the association of Au with As, Se, Ag and Cu. Image from Tharalson et al. (in press).

Contact **Portable Spectral Services**  
for more information.  
[www.portaspecs.com](http://www.portaspecs.com)