

**AEX METAL MINING
2022**

**PETROGRAPHICAL AND MINERALOGICAL
SEM-EDS-XRD ANALYSIS**

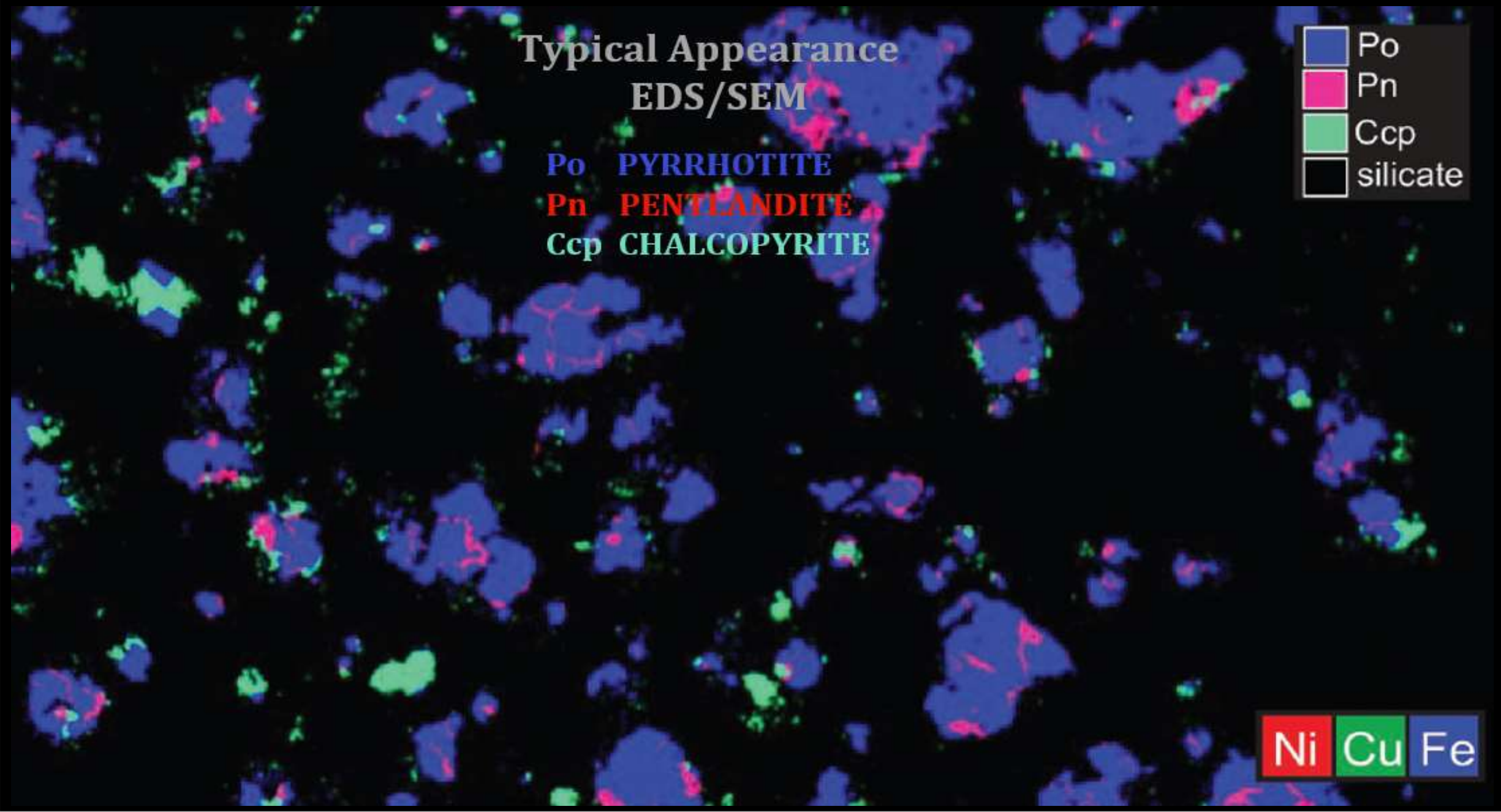


**Typical Appearance
EDS/SEM**

Po PYRRHOTITE

Pn PENTLANDITE

Ccp CHALCOPYRITE



AEX #F3/FM
Ferromagnetic Concentrate

SEM-EDS-XRD ANALYSIS

HUNITEK HACETTEPE UNIVERSITY
Research and Application Center for Advanced Technologies
Asistant Professor Dr. Evren Çubukçu

CHEMICAL ANALYSIS

ACME BUREAU VERITAS / ARGETEST LABORATORIES

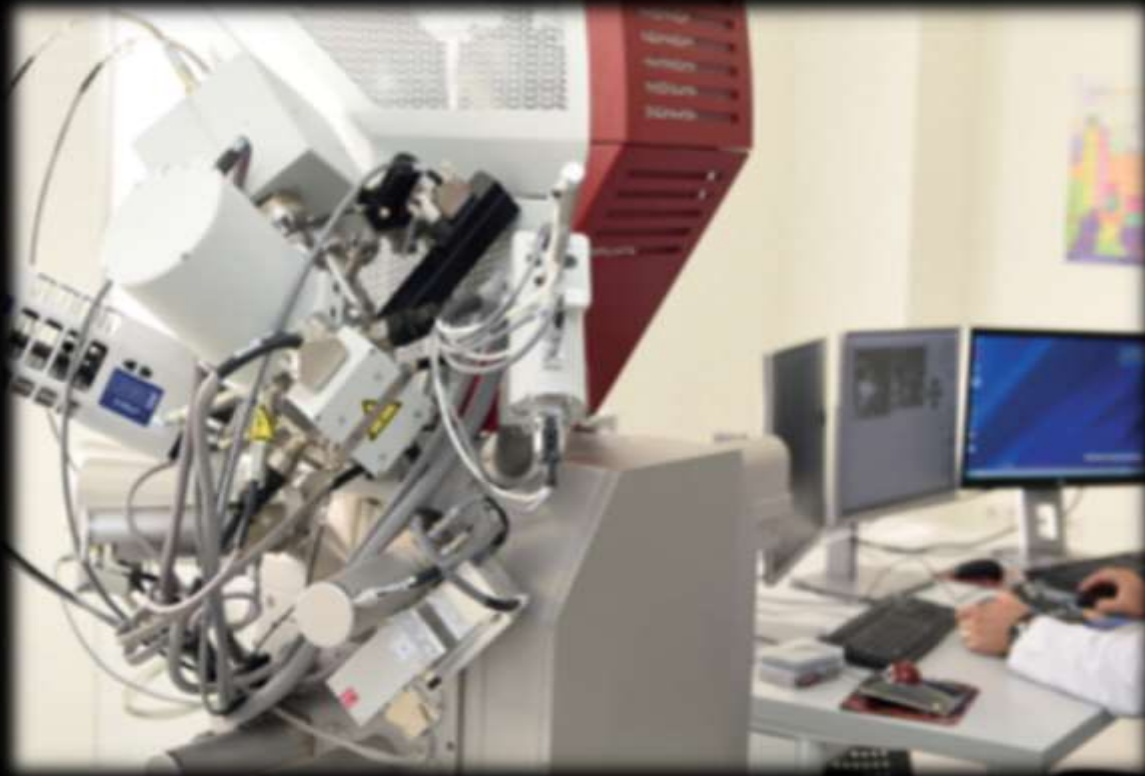
2022



AEX #F3/FM Concentrated SEM/ EDS Analyzes

Mineralogical – Petrographic analyzes are performed by Assistant Professor Dr. Evren Çubukçu using the Oxford XMaX 150 Energy Dispersive Spectrometer (EDS) integrated on the Tescan GAIA 3 model electron microscope (SEM).

**HUNITEK HACETTEPE UNIVERSITY ADVANCED TECHNOLOGY APPLICATION AND RESEARCH CENTER
Electron Microscopy Laboratory Petrographic-Mineralogical SEM-EDS analyzes**



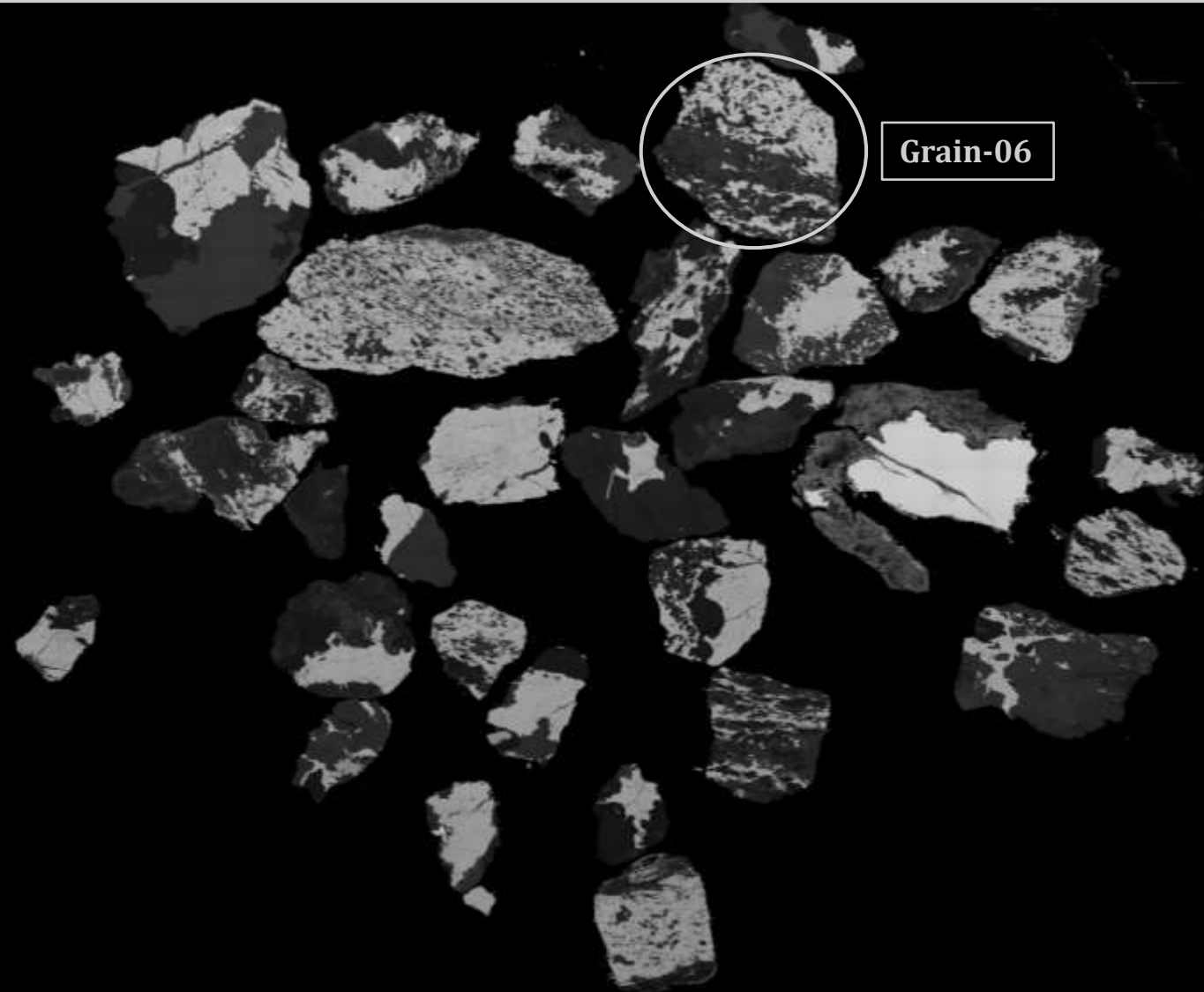


AEX #F3/FM
PYRRHOTITE
4C Monoclinic
FERRO MAGNETIC

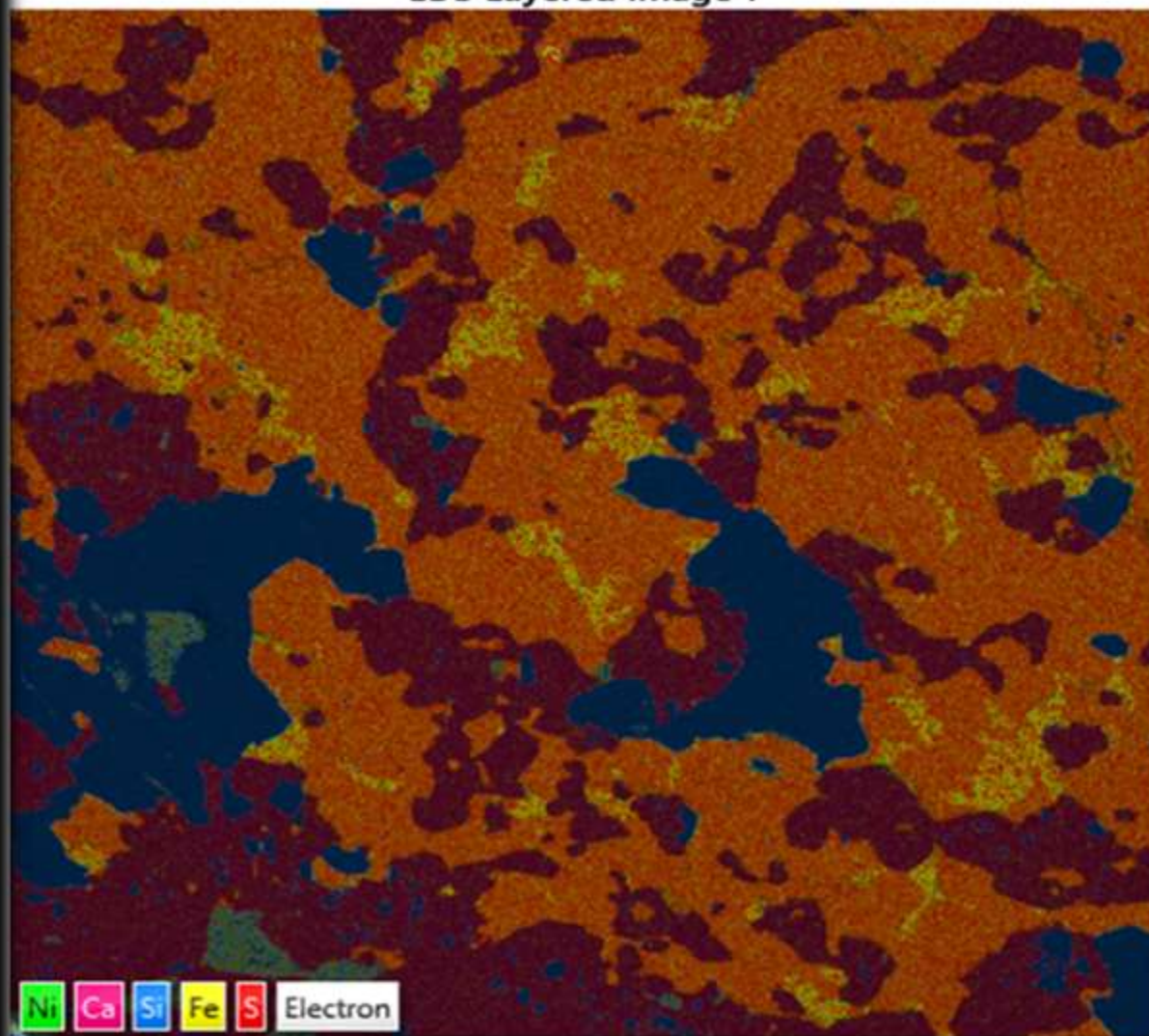
Primary Minerals
Pyrrhotite 4C (Fe₇-S₈)
Pentlandite (Fe,Ni,Co)₉S₈
Chalcopyrite (CuFeS₂)

PRIMARY ORE MINERALS

METAL	GRADE	MINERAL	CHEMICAL FORMULA
Ni - NICKEL	1850ppm	Pentlandite Fe-Cr-Ni	(Fe,Ni,Co) ₉ S ₈ %33.5Ni, %2.7Co, %28.1Fe, %36.0S Fe ₇ Cr ₂ Ni %70.7Fe, %17.5Cr, %9.4Ni Native Elements and Alloys - UM2001-06-E: CrFeNi (Mindat)
Co - COBALT	445ppm	Pentlandite Cobaltoan Arsenopyrite	(Fe,Ni,Co) ₉ S ₈ %33.5Ni, %2.7Co, %28.1Fe, %36.0S (Fe,Co)AsS %21.6Co, %6.2 Fe, %41.0As, %22.5S
Cu - COPPER	828ppm	Chalcopyrite	CuFeS ₂ %34.4Cu, %30.4Fe, %34.9S
Pb - LEAD	517ppm	Galena	PbS %83.6Pb, %0.75Ni, %12.8Fe, %13.4S
Zn - ZINC	359ppm	Sphalerite-Wurtzite	ZnFeS %56.5Zn, %0.42Ni, %5.7Fe, %35.6S
Ag - SILVER	8ppm	?	(under investigation)
Au - GOLD	0.1ppm	Electrum	Au(Ag)
Fe - IRON	%52	Pyrrhotite 4C	Fe ₇ S ₈ %58.0Fe, %42.0S
S - SULPHUR	%32	Pyrrhotite 4C	Fe ₇ S ₈ %58.0Fe, %42.0S

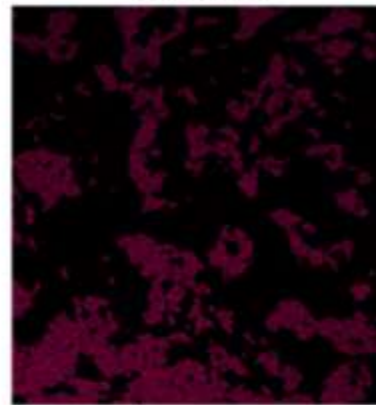


EDS Layered Image 1



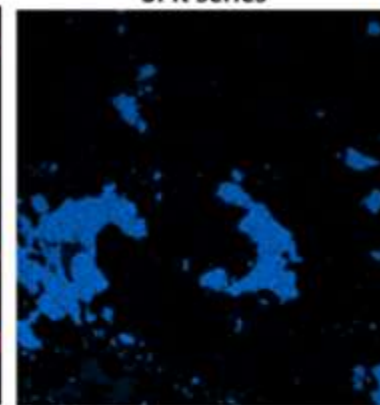
500µm

Ca K series



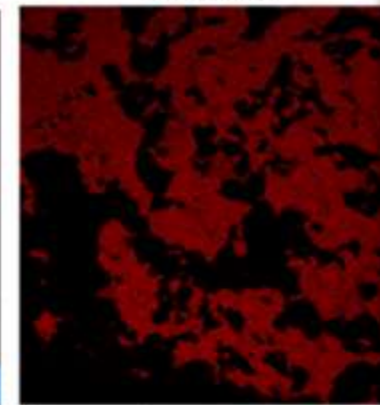
500µm

Si K series



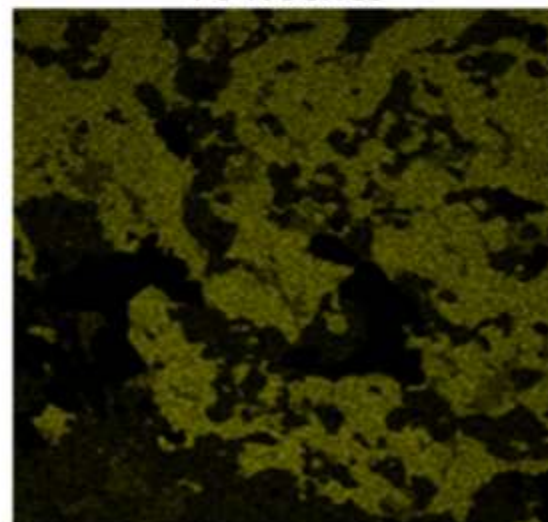
500µm

S K series



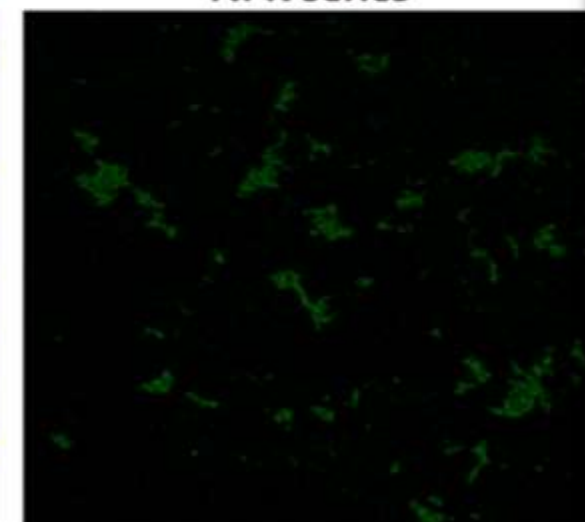
500µm

Fe K series



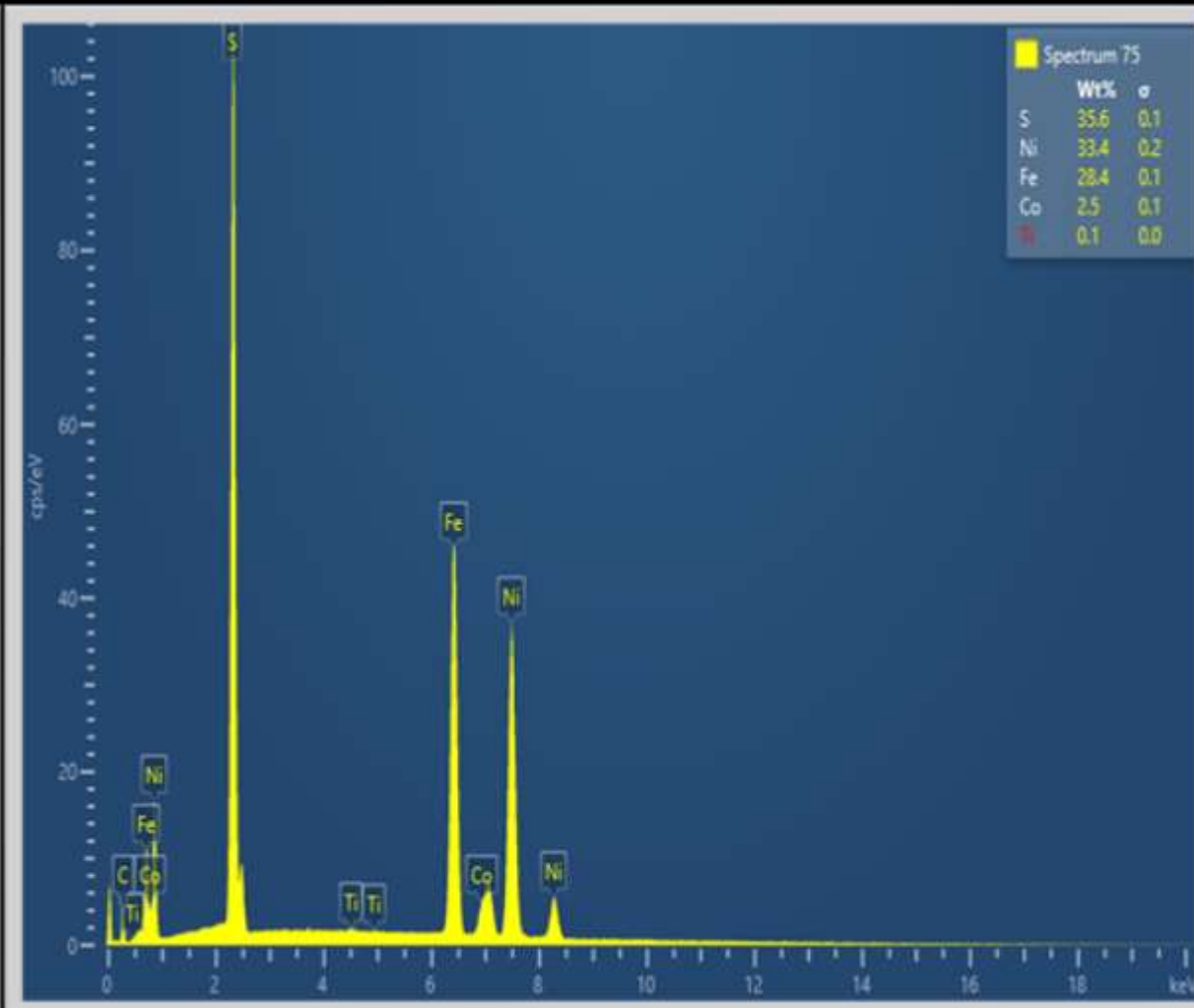
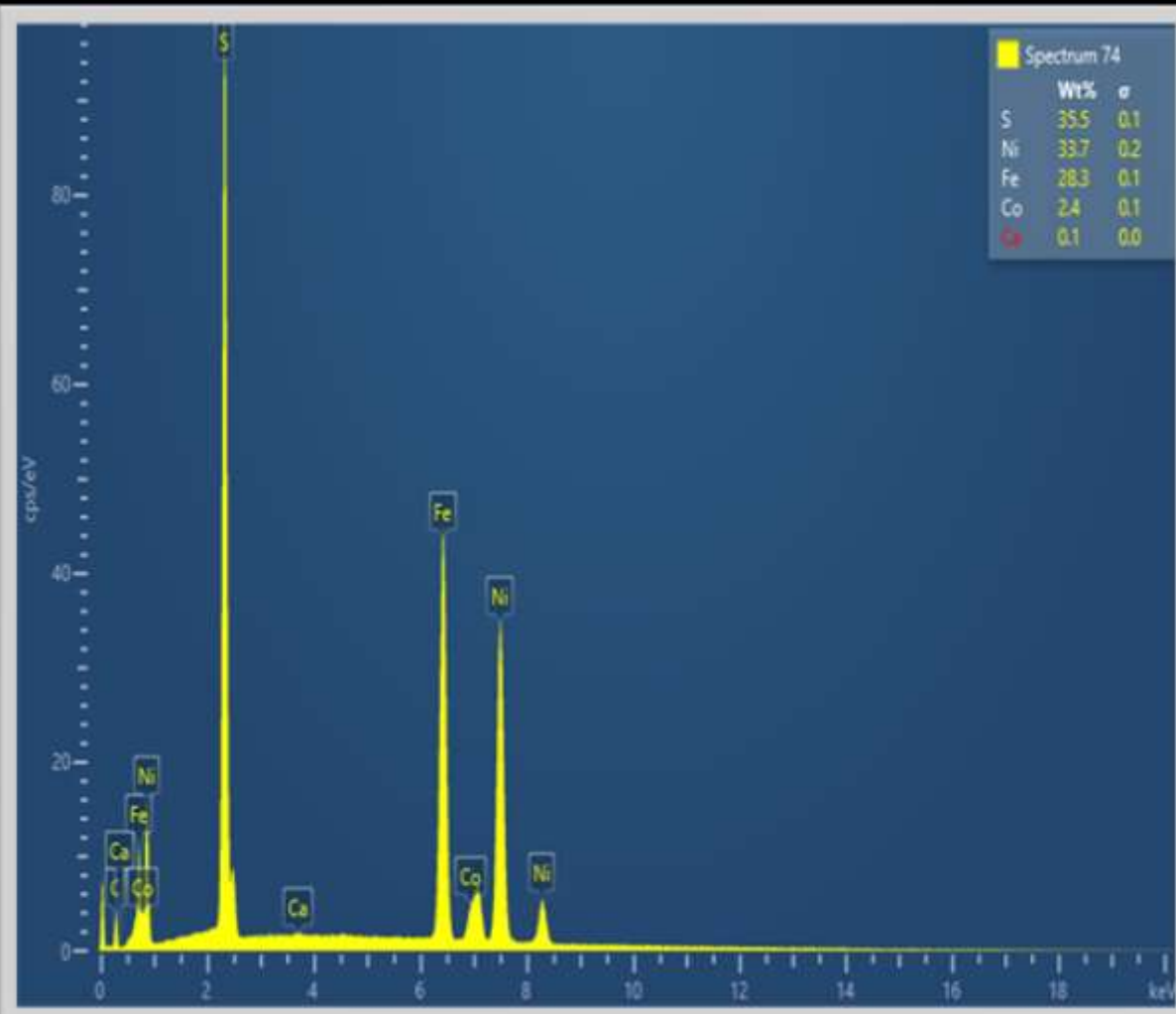
500µm

Ni K series

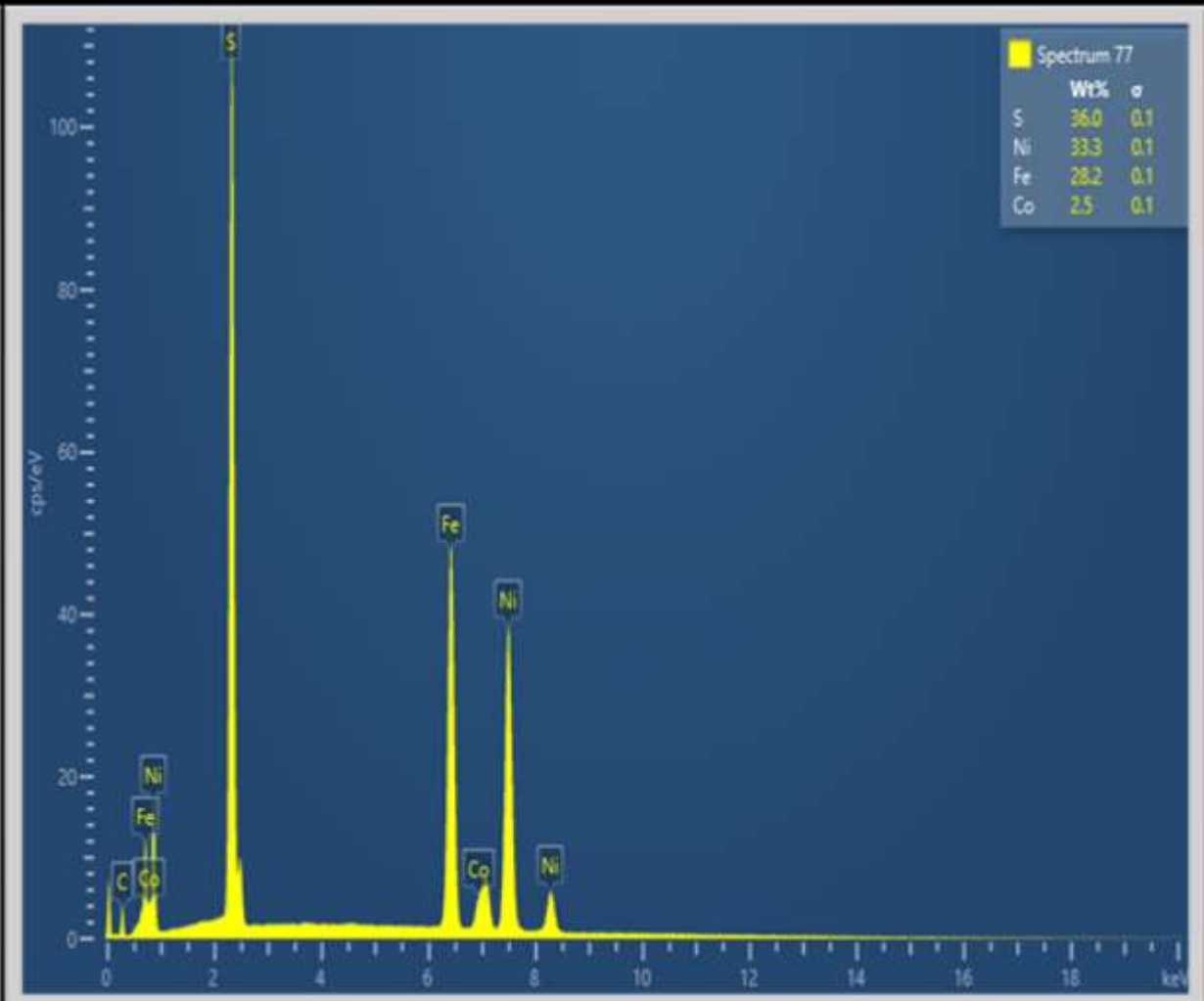
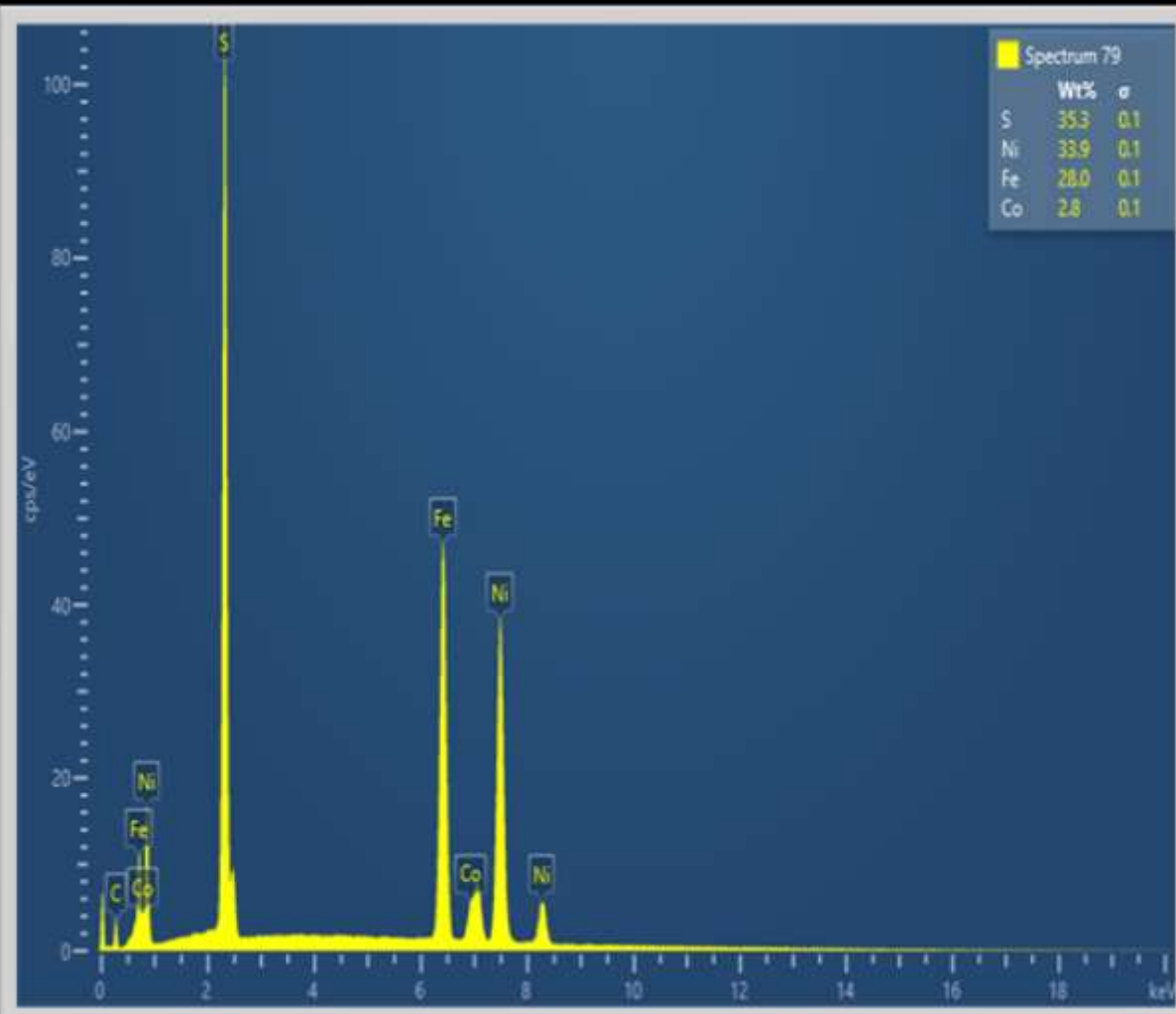


500µm

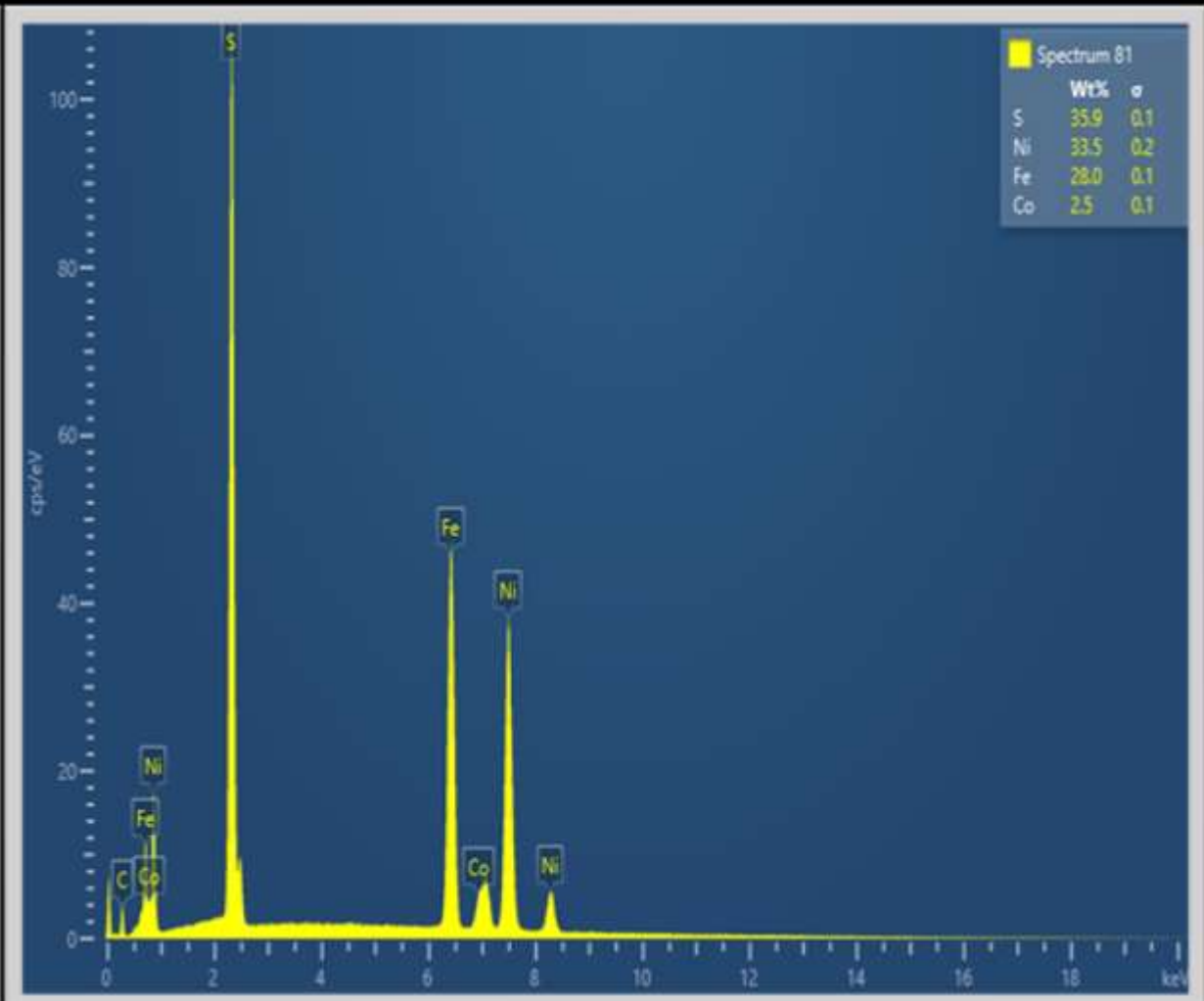
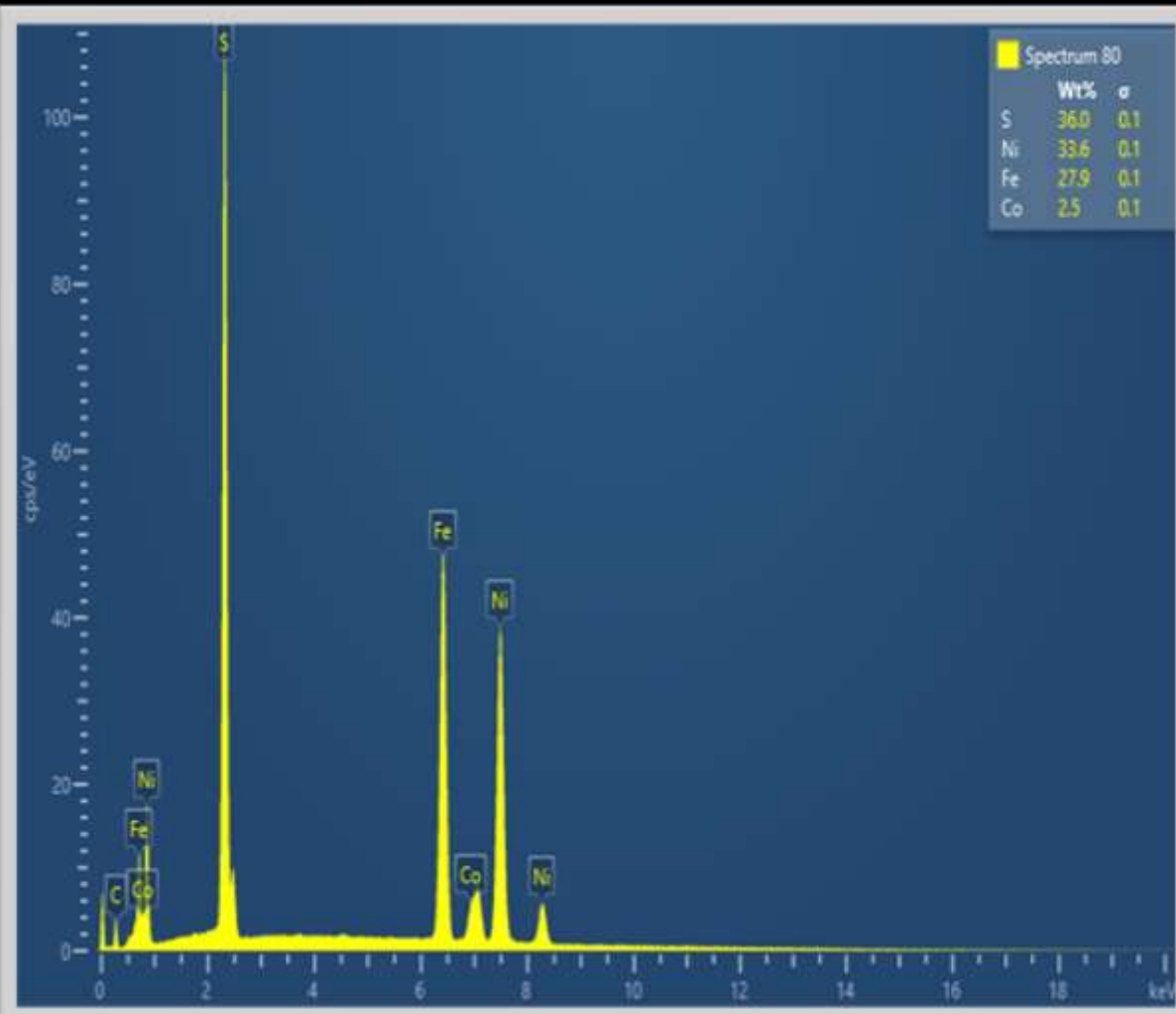
Pentlandite (Fe,Ni,Co)₉S₈



Pentlandite (Fe,Ni,Co)9S8



Pentlandite (Fe,Ni,Co)9S8

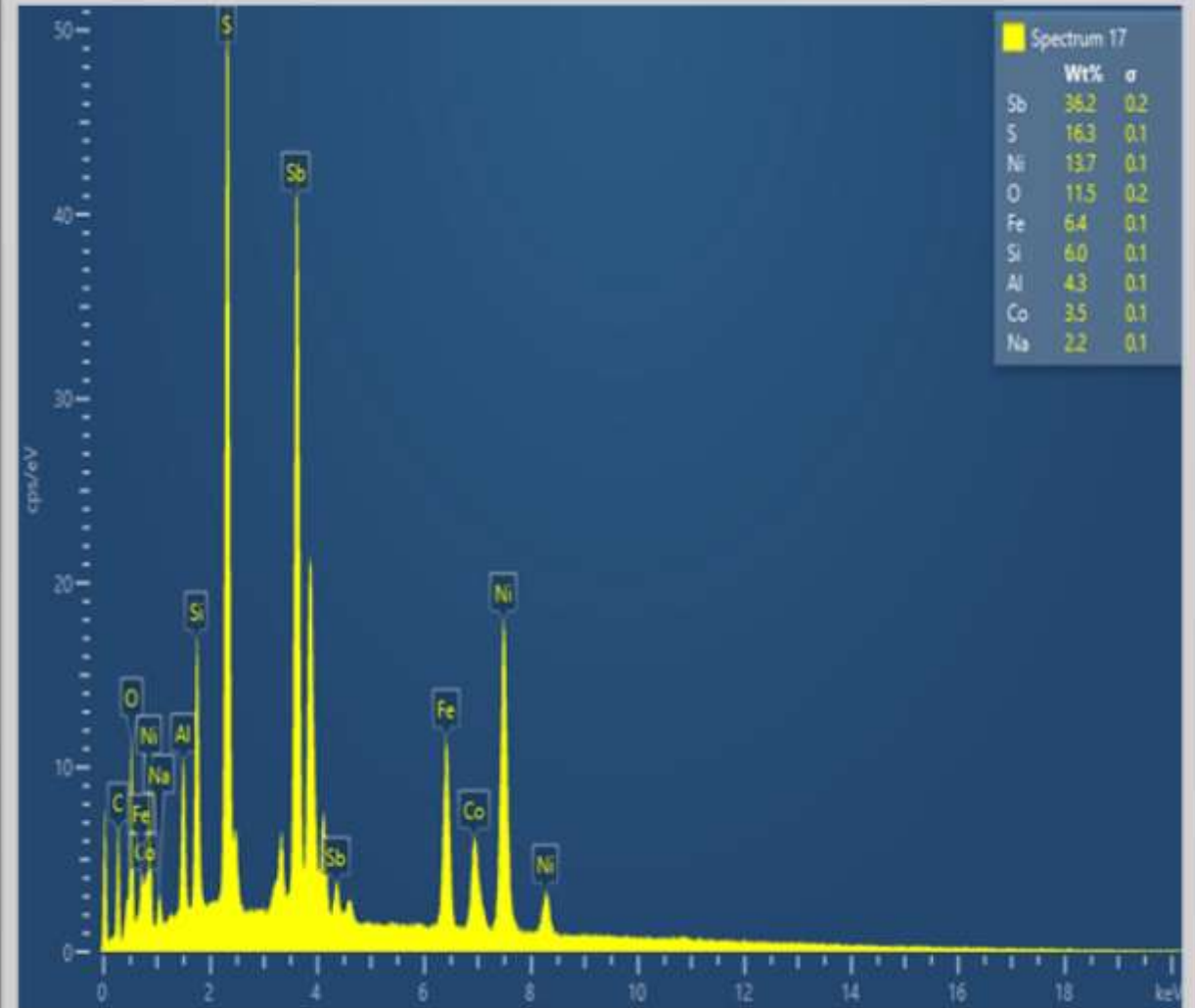
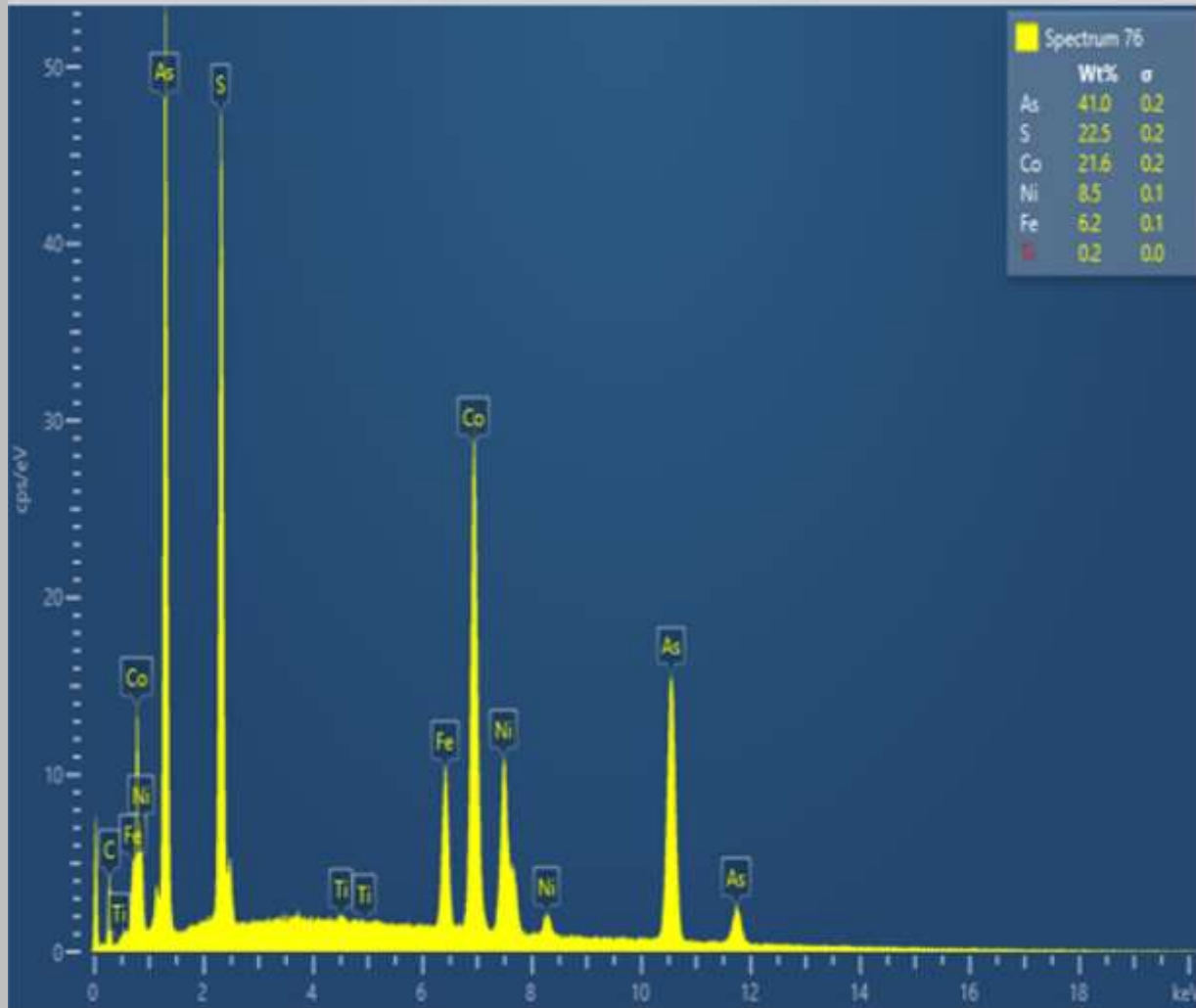


Cobaltoan Arsenopyrite (Co,Ni)AsS

%21,6 Co, %8,5 Ni, %6,2 Fe, %41,0 As, %22,5 S

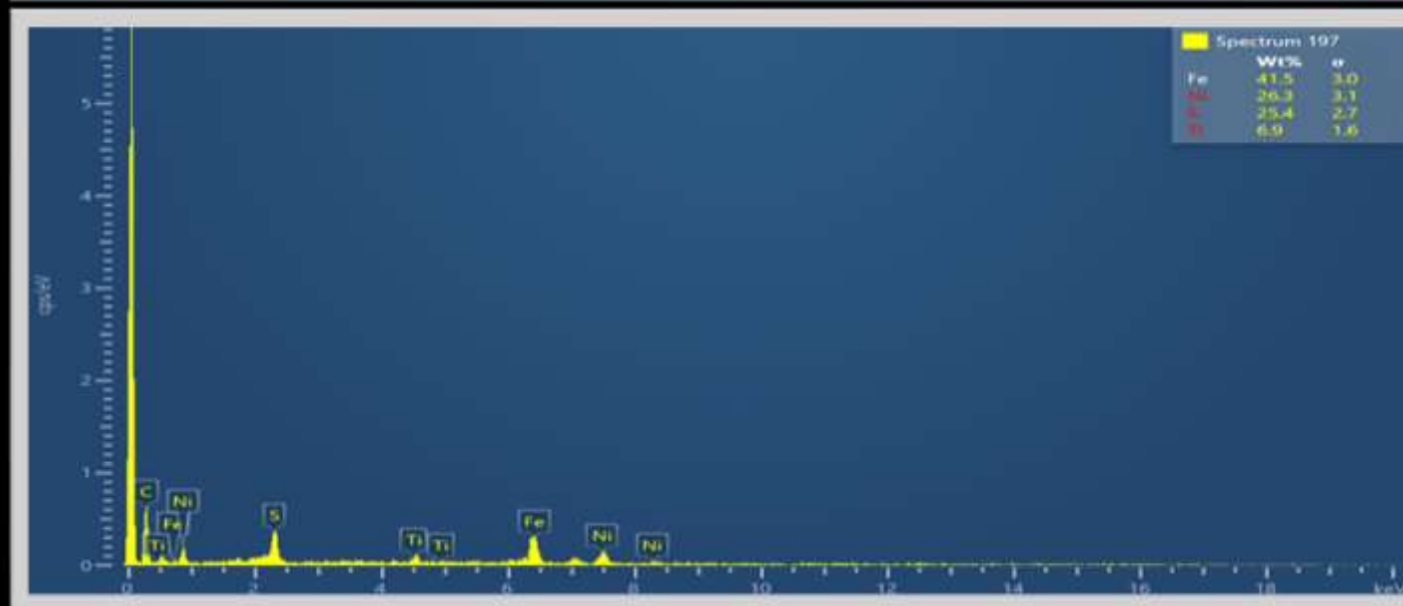
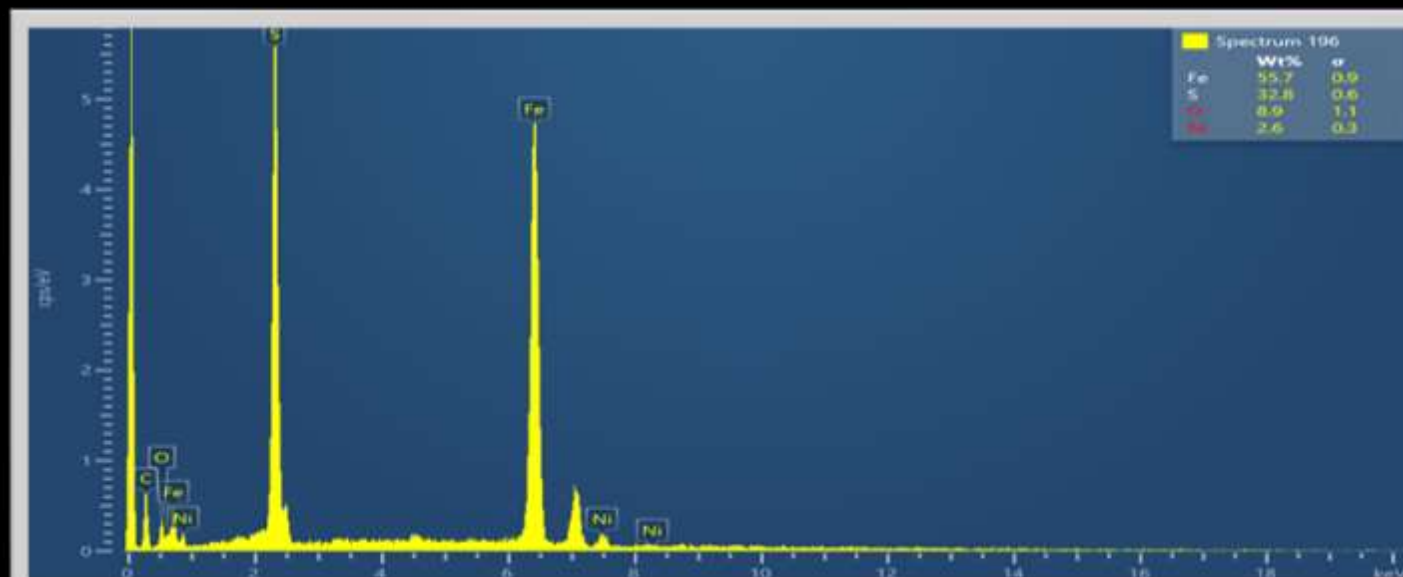
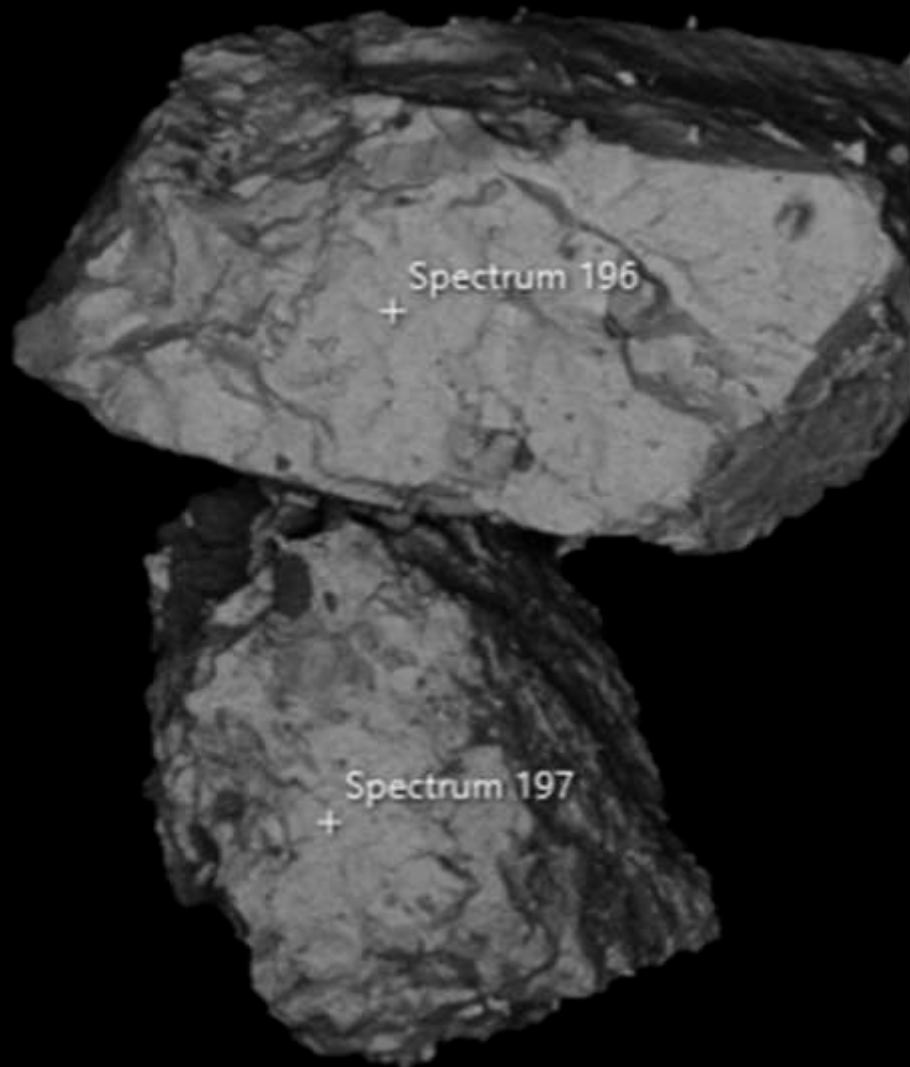
Ni,Co Ullmanite

%13,7 Ni, %3,5 Co, %36,2 Sb, %16,3 S, %6,4 Fe



AEX #F3/FM

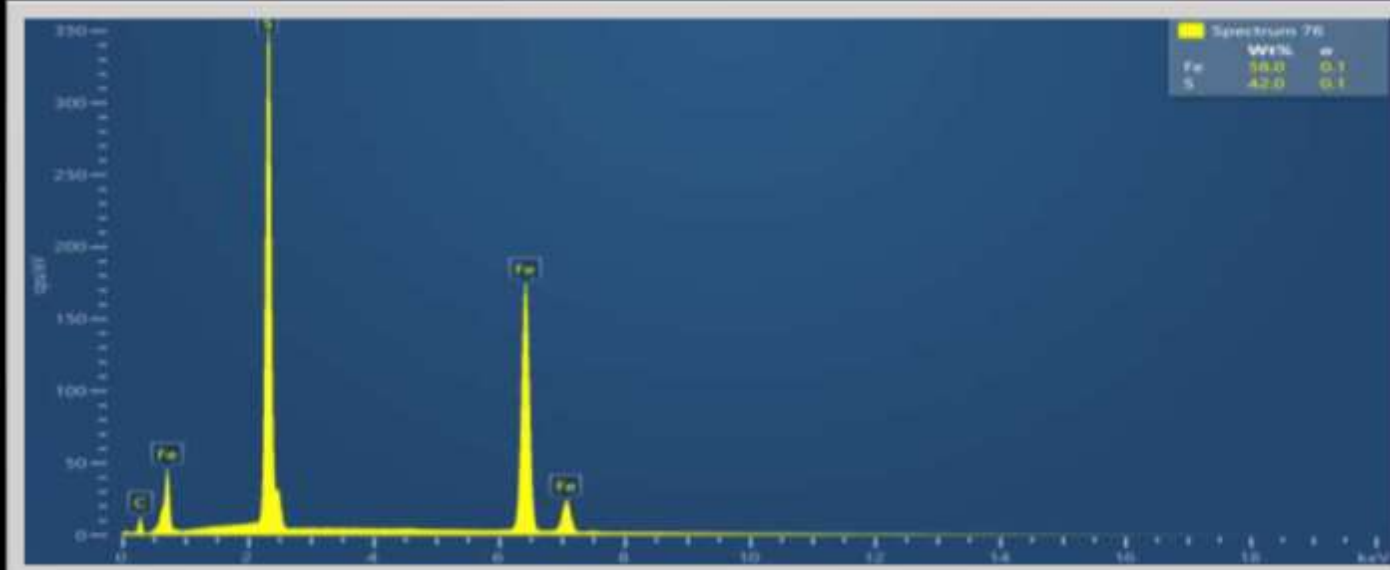
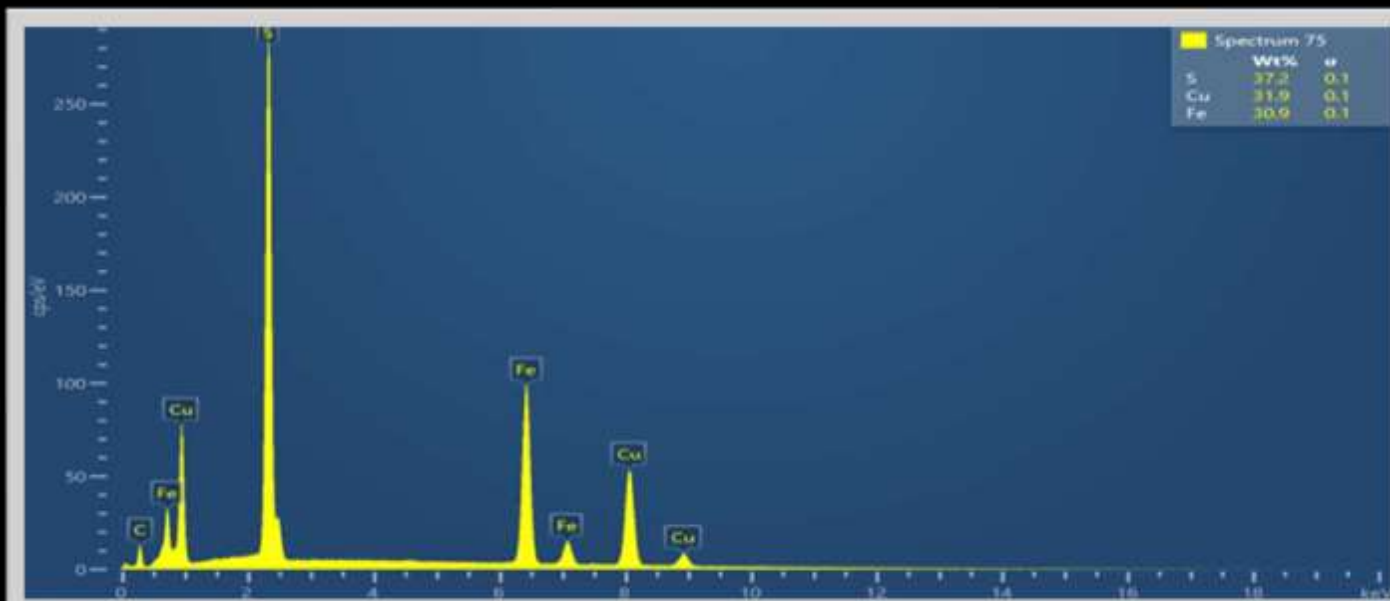
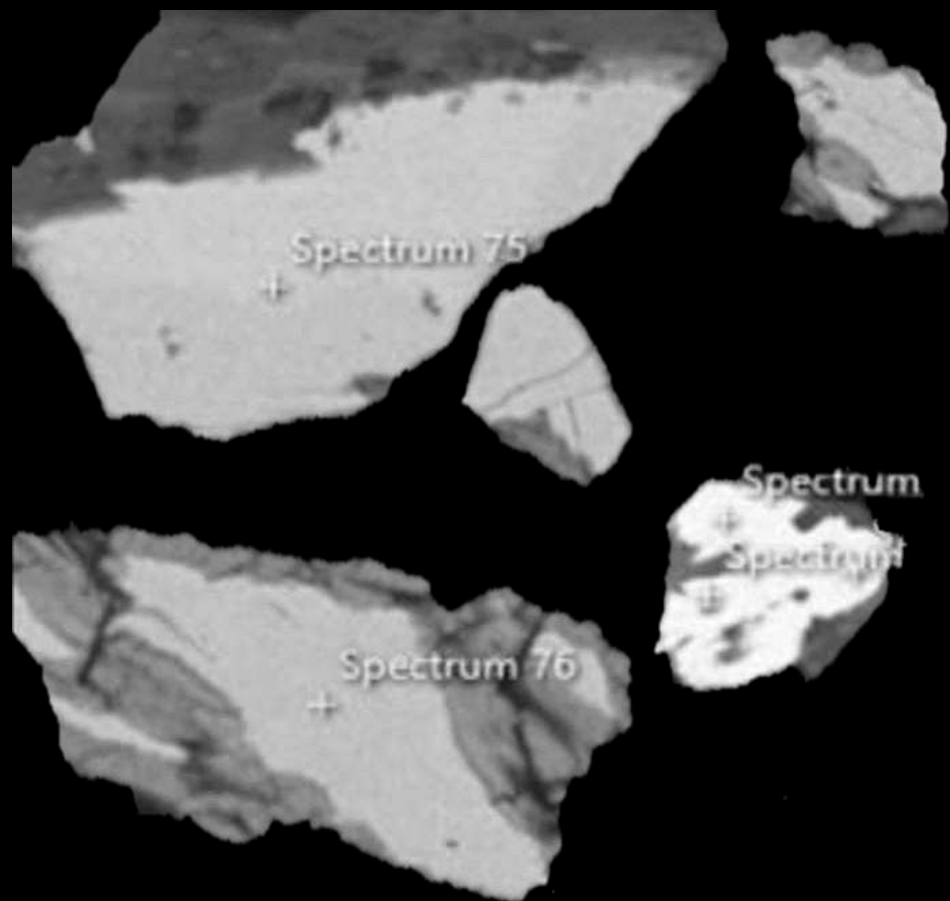
196 Pyrrhotite 4C / 197 Pentlandite SEM/EDS 11/12/2021



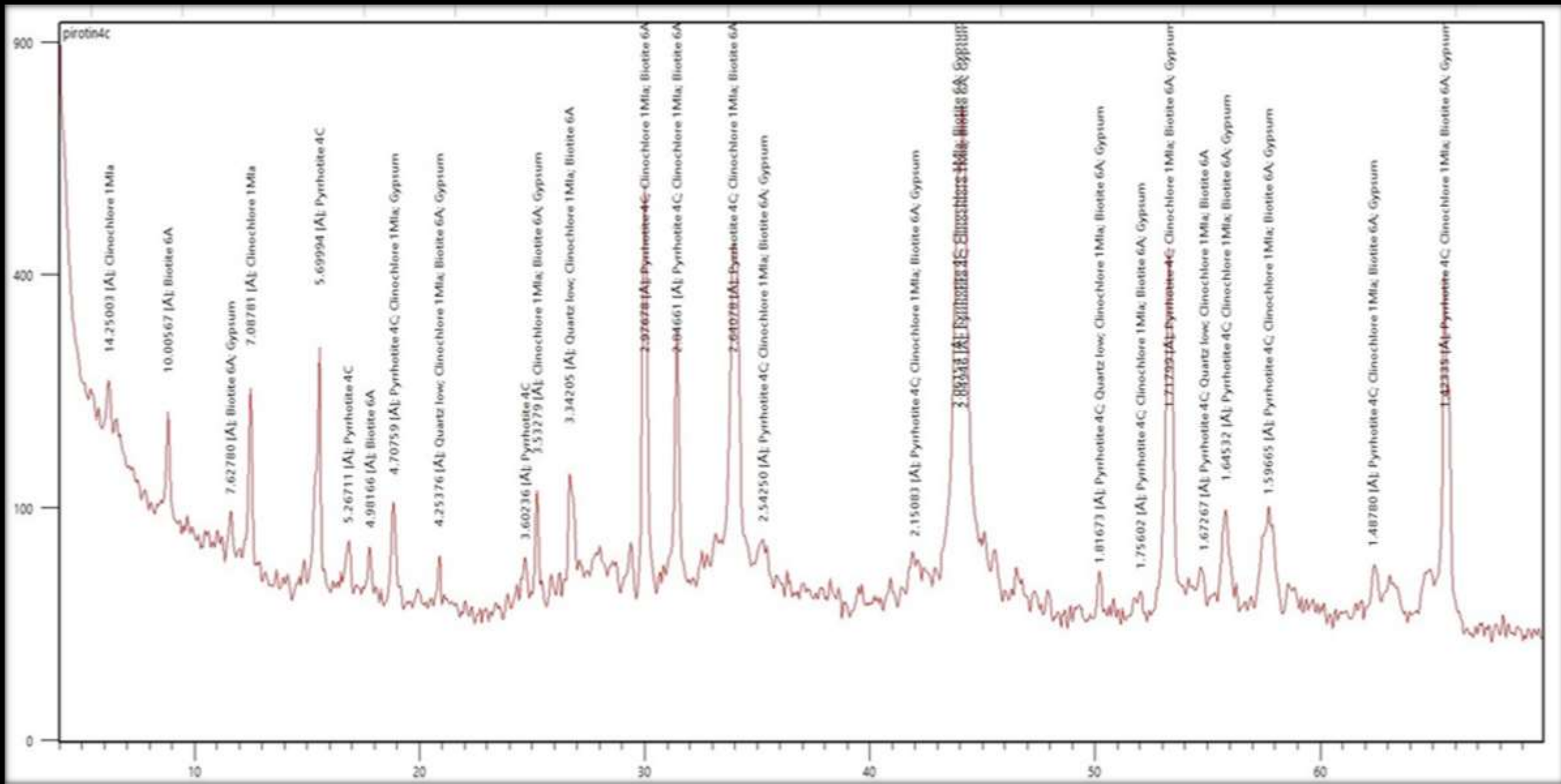
AEX #F3/FM

75 Chalcopyrite - 76 Pyrrhotite 4C

SEM/EDS 11/12/2021



AEX #F3/FM Concentrated Pyrrhotite 4C XRD - MTA 02/12/2021



#F3

Quartzite, Chlorite, Albit, Mica Schist - Gneiss



Conventional Green Mining



High Technology Green Metals



www.aexmetal.com