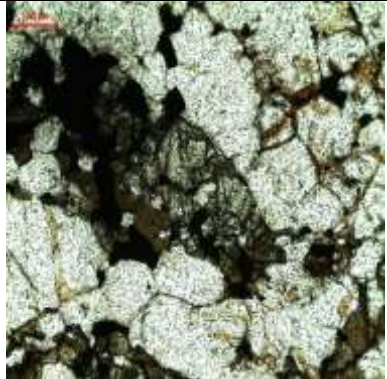
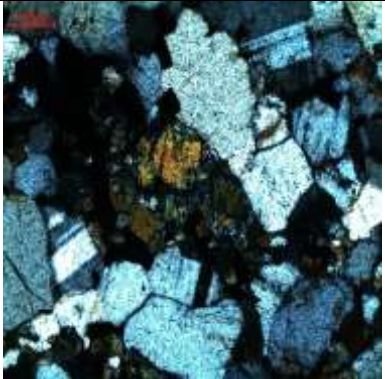

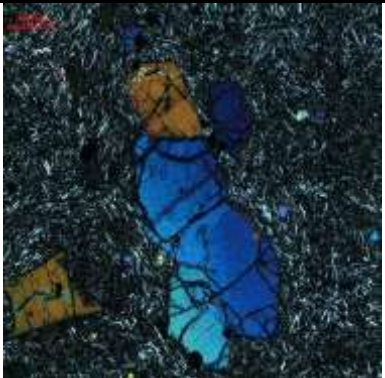
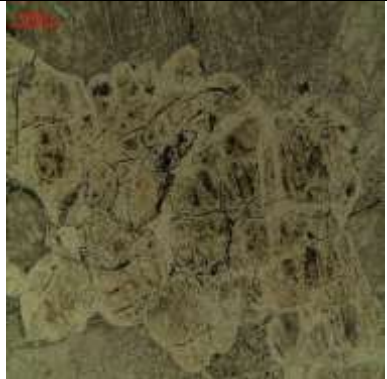

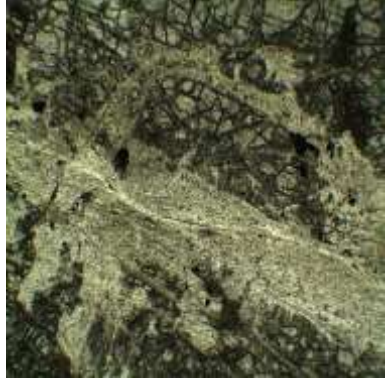



Plane Polarized	Mineral Name	Cross Polarized
	<b>EPIDOTE</b>	
	Mineral Group: <b>Silicates - Sorosilicates</b>	
	Chemical Formula: <b>Ca<sub>2</sub>Fe<sub>3+</sub>Al<sub>2</sub>O(Si<sub>2</sub>O<sub>7</sub>)(SiO<sub>4</sub>)(OH)</b>	
Color: Light yellowish green	Birefringence-Interference color: 0.015-0.049 - 3rd order	
Pleochroism: Strong	Extinction: Parallel	
Cleavage: Perfect in one direction	Twinning: Very rare	
Fracture: Possibly	Alteration: Chlorite	
Relief: 1.69-1.72 High	Optical Sign: Monoclinic (-/+)	
Inclusion: Possibly	Elongation Sign: Biaxial (-/+)	
Occurrence: Igneous, Metamorphic, Sedimentary		
Distinctive Properties: Color, high birefringence color		
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Plane Polarized	Mineral Name	Cross Polarized
	<b>OLIVINE</b>	
	Mineral Group: <b>Silicates-Nesosilicates</b>	
	Chemical Formula: <b>Mg<sub>2</sub>SiO<sub>4</sub> (Forsterite)</b> <b>Fe<sub>2</sub>SiO<sub>4</sub> (Fayalite)</b>	
Color: Colourless, greenish yellow due to higher Fe content	Birefringence-Interference color: 0.033-0.052 up to 2nd to 3rd order	
Pleochroism: None	Extinction: Parallel	
Cleavage: Poor	Twinning: Rarely	
Fracture: Irregular	Alteration: Serpentine, chlorite, iddingsitization	
Relief: 1.63-1.82 Very high	Optical Sign: Orthorhombic (-/+)	
Inclusion: Rarely contains opaque minerals	Elongation Sign: Biaxial (-/+)	
Occurrence: Magmatic, Metamorphic and Sedimentary rocks		
Distinctive Properties:		
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Plane Polarized	Mineral Name	Cross Polarized
	<b>SERPENTINE</b>	
	Mineral Group: <b>Silicates-Phyllosilicates</b>	
	Chemical Formula: <b>Mg<sub>3</sub>Si<sub>2</sub>O<sub>5</sub>(OH)<sub>4</sub></b>	
Color: Pale yellow due to Fe content		Birefringence-Interference color: 1st order, yellow
Pleochroism: Rarely (If contains Fe)		Extinction: Parallel, inclined
Cleavage: Perfect (001)		Twinning: Not visible
Fracture: Possibly		Alteration: Talc, magnesite
Relief: Low		Optical Sign: Biaxial (-)
Inclusion: None		Elongation Sign: (+)
Occurance: Alteration products of ferromagnesian minerals		
Distinctive Properties: Mesh texture, birefringence color		
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PlanePolarized	Mineral Name	Cross Polarized
	<b>TALC</b>	
	Mineral Group: <b>Silicates-Phyllosilicates</b>	
	Chemical Formula: <b>Mg<sub>3</sub>Si<sub>4</sub>O<sub>10</sub>(OH)<sub>2</sub></b>	
Color: Colorless, pale yellow		Birefringence-Interference color: 2nd-3rd order
Pleochroism: None		Extinction: Parallel, sometimes inclined
Cleavage: Perfect (001)		Twinning: None
Fracture: Rarely		Alteration: Magnesite
Relief: Moderate		Optical Sign: Biaxial (-)
Inclusion: Rarely		Elongation Sign: -
Occurance: Metamorphic and Sedimentary rocks		
Distinctive Properties: Can be found with olivine and serpentine group minerals		
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