

GLY 4310C Lab 1 CLASS: SILICATE

Subclass: Nesosilicates

Mineral Name	H	G	Color Streak Color	Cleavage, Fracture, or Parting	Luster	Other Properties	Notes
OLIVINE	(4.5)	3.5	lt. green/white	even frac.	dull to vitreous		green sugar
WILLEMITE	(4.5)	(5.0)	greenish white/ white	(1 dir?)	vitreous	acid rxn due to calcite SW-green LW-bright green	SW/LW pink/orange due to calcite - often assoc. w. zincite, franklinite
KYANITE	5-7	(3.2)	pale blue/white	1 dir, perfect	vitreous to silky		
SILLIMANITE	6	(3.2)	milky to tan, reddish brown/ white	uneven to splintery	vitreous to dull		layered
ANDALUSITE	6.5	(3.3)	lavender/none	uneven to jagged	dull to silky		associated with muscovite
TOPAZ	8	3.5	clear/none	perfect basal/ subconchoidal. frac.	vitreous	transparent	
STAUROLITE	6.5	(3.5)	brown/none	poor basal	vitreous		associated with garnet & mica
ALMANDINE	6.5	(4.3)	red wine/none	subconchoidal	vitreous		
GROSSULAR	6.5	3.5	pink, purple, cardboard brown/ none	uneven to conchoidal fracture	vitreous		banding in crystals
ANDRADITE	6.5	3.9	brown to black/none	uneven	vitreous		

GLY 4310C Lab 1 CLASS: SILICATE

Subclass: **Sorosilicates**

Mineral Name	H	G	<u>Color</u> Streak Color	Cleavage, Fracture, or Parting	Luster	Other Properties	Notes
EPIDOTE	5.5	3.1	pistachio green/white	uneven fracture (basal cleavage)	dull with vitreous flecks		
CLINOZOISITE/ZOISITE	(6-7)	(3.4)	green/none	subconchoidal to splintery fracture	vitreous		Radiating habit
VESUVIANITE	6	(3.4)	brown/white	uneven	vitreous		Columnar habit
HEMIMORPHITE	5	(3.0)	ice blue/white	uneven	pearly to dull		Globular habit

Subclass: **Cyclosilicates**

Mineral Name	H	G	<u>Color</u> Streak Color	Cleavage, Fracture, or Parting	Luster	Other Properties	Notes
BERYL	6.5	2.6	milky, yellow stains/none	even fracture	pearly to dull		
CORDIERITE	(7-7.5)	3.0	black/(none)	subconchoidal fracture poor 1-d cleavage	greasy		
TOURMALINE	6.5	3.5	black/black	conchoidal fracture	vitreous		striated crystals
AXINITE	(6.5-7)	4.8	rusty brown to black/(none)	basal cleavage, uneven fracture	vitreous spots, dull		plumrose habit

GLY 4310C Lab 1 CLASS: SILICATE

Subclass: Inosilicates

**Pyroxene group**

Mineral Name	H	G	<u>Color</u> Streak Color	Cleavage, Fracture, or Parting	Luster	Other Properties	Notes
ENSTATITE	5.5	3.5	black to greenish-gold/ white	even fracture	pearly		
DIOPSIDE	5.5	3.5	dark olive/white	uneven fracture	vitreous		associated with biotite
HEDENBERGITE	6.5	3.5	black to green/none	uneven fracture	silky	acid reaction due to calcite impurity	
AUGITE	5.5	3.3	black to green/green	2D @ 90°	vitreous on cleavage, otherwise dull		fibrous texture
SPODUMENE	6.5	3.0	white to beige/none	(2D near 90°)	vitreous on cleavage, otherwise dull		

GLY 4310C Lab 1 CLASS: SILICATE

Subclass: Inosilicates

**Pyroxenoid Group**

Mineral Name	H	G	<u>Color</u> Streak Color	Cleavage, Fracture, or Parting	Luster	Other Properties	Notes
WOLLASTONITE	5.0	(3.5)	white/white	jagged fracture	vitreous		assoc. with garnet, diopside
RHODONITE	5.5	3.5	pink/white	uneven fracture	earthy		
PECTOLITE	4.5	2.8	white/white	jagged fracture	silky		radiating habit

4310lab\_S20\4310lab1\_HS\_S20.wpd  
January 8, 2020