

MINERAL LAB

Get a mineral test kit, record sheet and choose a mineral to identify. Go through the following steps and record your answers on your record sheet. Check your answer on the back side of your record sheet. If you have time, return your mineral to the box and select another one to identify.

A. Color



Look at your mineral. What colors do you see? Record your answer on your record sheet under color.

Note: Color is the least reliable property for identification.

A. Luster: Look at your mineral again. How does it reflect light. Look at the pictures below to determine the luster:



1. Is it metallic (shiny and gold or silver color) if so write metallic on your answer sheet under luster. If not, go to #2

2. Is it non-metallic (does not look like metal in color but still may be shiny). Non-metallic includes:

Pearly

Vitreous

Resinous

Silky

Earthy (dull)

3. Streak: Take your mineral and draw a line on either the white porcelain streak plate or the black porcelain streak plate. What color is the streak? Record your answer on your record sheet under streak



4. Hardness: A mineral's hardness is its resistance to scratching.

1. **Fingernail – 2.5** Use your fingernail and try to scratch the mineral
2. **Penny – 3.0** If your fingernail doesn't scratch it, use the penny
3. **Nail – 5.0** If the penny doesn't scratch it, try the nail
4. **Glass – 5.6** If the nail doesn't scratch it, try the glass plate
5. **Streak plate – 7.5** If the glass plate doesn't scratch it, try the streak plate
6. **If none of these scratch it, list the hardness at 8 – 10**
7. Record your answer on the record sheet under hardness

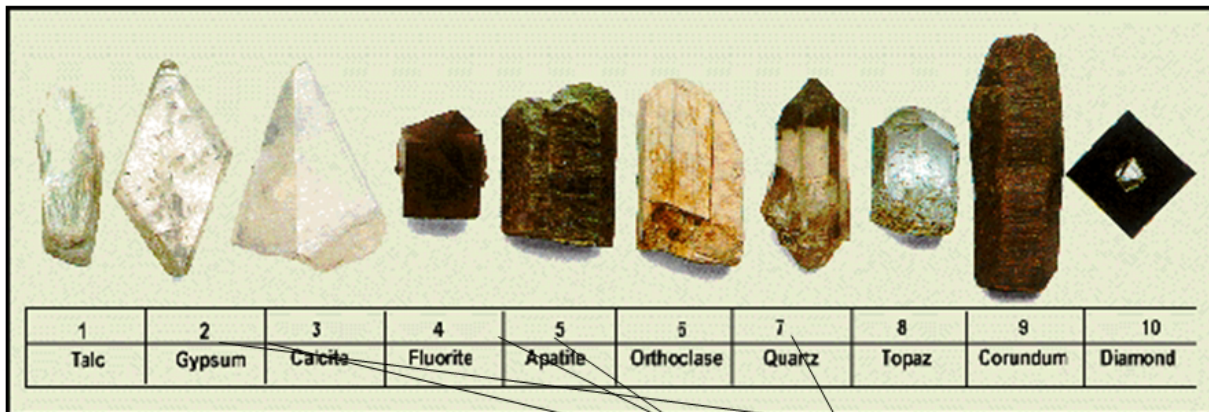
Mohs' Hardness Scale

Soft:

Leaves mark or gets grooved

Hard:

Scratches other stuff



Fingernail 2.4

Penny 3.0

Nail 5.0

Glass Plate 5.6

Streak Plate 7.5

The Harder one scratches the Softer one

(If your mineral scratches the other, the mineral is harder)

(If your mineral is scratched by the other, the mineral is softer)

MINERAL LAB RECORD SHEET

Mineral Name	Color	Luster	Streak	Hardness	Magnetic	Other Properties
Fluorite	green, yellow, purple	vitreous	white	4	No	forms cubic crystals
Feldspar	white, red, green	vitreous	white	6	No	cleavage angle just under 90 deg
Hematite	red, brown, black	dull to metallic	dark red	5.5 - 6.5	No	if heated becomes magnetic
Pyrite	pale brass yellow	metallic	brown	6 - 6.5	No	brittle
Quartz (milky)	colorless to white	vitreous	none	7	No	conchoidal fracture
Calcite	white, yellow, brown, blue	vitreous/earthy	white	3	No	fluorescent and has many colors
Quartz (chalcedony)	colorless to gray	waxy	none	7	No	sometimes shows banding
Magnetite	iron-black	metallic	black	6	Yes	magnetic
Gypsum (alabaster)	white, gray, yellow	pearly to earthy	white	2	No	can be scratched by fingernail
Talc	white, green gray	pearly to greasy	white	1	No	greasy feel
Halite	colorless, white, pink	vitreous	white	2.5	No	salty to taste
Mica (biotite)	green, brown, black	vitreous/metallic	none	2.5 - 3	No	thin sheets are elastic
Graphite	black	metallic/dull	black	1 to 2	No	greasy feel (used in pencils)
Gypsum (Satin Spar)	white, gray, yellow	silky	white	2	No	fibrous
Gypsum (Selenite)	colorless	vitreous	white	2	No	bladed

Mineral Name	Color	Luster	Streak	Hardness	Magnetic ?

MINERAL LAB ANSWER SHEET

Look at the number on your mineral and match it to the mineral below to find the correct answer.

- 1 Fluorite
- 2 Feldspar (Microcline)
- 3 Hematite
- 4 Pyrite
- 5 Quartz (Milky)
- 6 Calcite
- 7 Quartz (Chalcedony)
- 8 Magnetite
- 9 Gypsum (Alabaster)
- 10 Talc
- 11 Halite
- 12 Mica (Biotite)
- 13 Graphite
- 14 Gypsum (Satin Spar)
- 15 Gypsum (Selenite)