

Questions and Answers sheet

Solicitation 19PE5021Q00007 -Lab Equipment and accessories

November 2020

Question 1: What material is to be ground?

Answer:

a. Sediments and Soils will be worked as:

- Sandy soils.
- Limestone soils.
- Silty soils.
- Humid **soils** or black earth.
- Clay soils.
- Soil stony.
- Peat soils .
- soil salt

b. Samples from mining and geological activity (rock minerals)

- Samples containing Mineral gold (Au), Silver (Ag)
- Quartz minerals: This group belongs to the minerals in which silica and silicates predominate.
- Ferruginous minerals: This group includes all those minerals in which iron predominates, both oxidized and in the form of pyrites.
- Copper minerals: This group includes all the minerals that contain copper, whether oxidized or in the form of pyrites.
- Complex minerals: This group includes minerals that contain compounds of arsenic, antimony, galena, oxides or carbonates of calcium and magnesium, bismuth tellurium, zinc, selenium and manganese.

c. Samples from industry (ceramics, cement, etc.)

- Calcium Carbonate
- Plaster
- Limestone
- Calcite
- Clinker
- Quartz

Question 2: What is the hardness of the material?

Answer: Of the most frequent samples during initial phase:

Sample	Hardness
soft floors ,brittle, hard	1
Gold	2.5 to 3
Talc	1
Plaster	2
Fluorite	4
Apatite	5

Support for 60 HRC ((Hardness Rockwell C), Topaz-level hardness shall be required during the mill lifecycle.

Question 3: What is the initial size of the material?

Answer: It varies depending on the type of sample (laboratory level)

Question 4: What is the total volume (ml) to grind?

Answer: Up to 300ml

Question 5: What is the desired final particle size?

Answer: 15-30 μm ; The particle size will simply be that which allows the best dissolution of the sample.

Question 6: What final volume of ground sample is needed?

Answer: Variable from 15ml to 250ml

Question 7: Why is the sample ground (purpose)?

Answer: For the preparation of samples that will be subsequently analyzed in the Chemistry Laboratory. This preparation consists of a physical treatment that can be the crushing and / or pulverization of the solid samples (rock minerals, sediments, mineral concentrates) in order to adapt them to the minimum requirements of subsequent chemical and analytical analyzes.

Question 8: What analysis will follow the milling?

Answer: Chemical analysis

Question 9: Is inert atmosphere necessary?

Answer: No

Question 10: Would you like to measure / record on-site temperature, gas pressure, and grinding parameters?

Answer: No

Question 11: If yes, would you like to program and control the mill through a PC with these parameters?

Answer: No

Question12: Are there specific contaminants that cannot be tolerated by polishing abrasion?
Answer: None

Question 13: Is the material sensitive to temperature or does it have a melting point?
Answer: None

End of questions and answers sheet