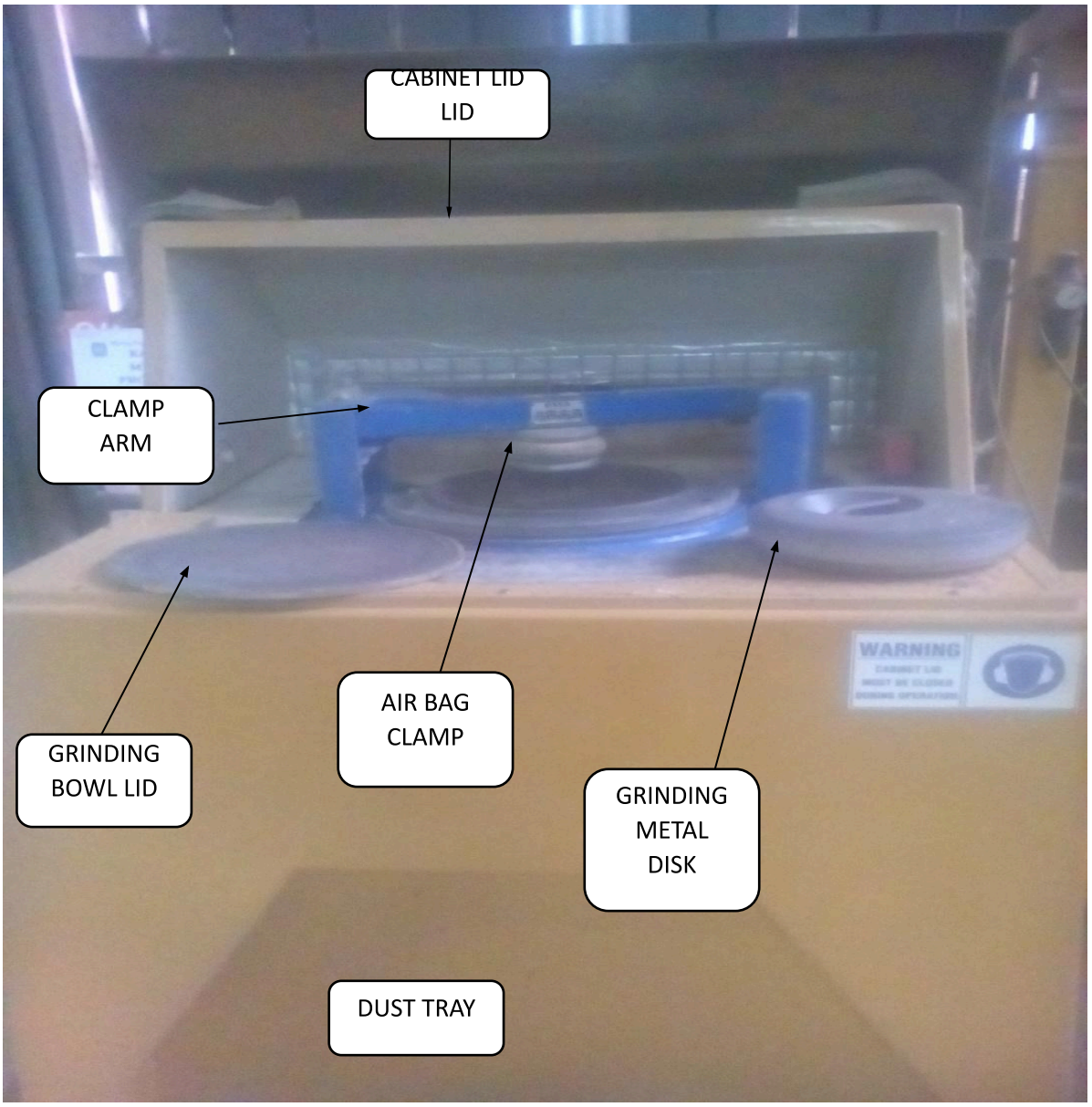
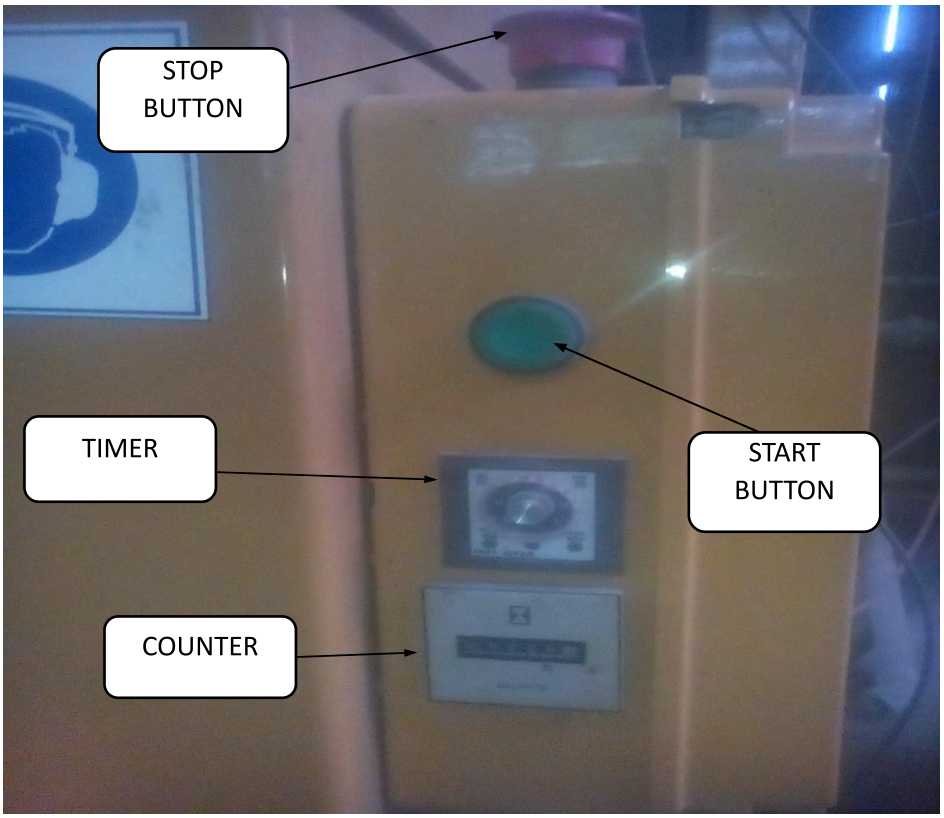
# STANDARD OPERATING PROCEDURE (SOP) LM5 PULVERIZER




**OBJECTIVE**

This Standard Operating Procedure (SOP) is specifically designed for the purpose of safe operation of the LABORATORY equipment '**LM5 PULVERIZER**'. The equipment operator must read through the procedure carefully and should fully understand it before operating the equipment and or otherwise consult the senior laboratory personnel for any clarifications prior to operation.




**HAZARDS**

- Heavy loads - Samples and grinding disk are heavy
- Compressed air – Use of compressed air at very high pressure
- Ergonomics – Improper stance during sample loading and unloading may cause server muscle strain or back injury
- Dust – Significant air borne dust is created by the LM5 Pulveriser
- Noise – Moderate noise level is created by the pulveriser operation

**SAFETY – Personal Protective Equipment (PPE)**

The following safety gears must be worn when operating the **LM5 PULVERIZER.** It is a standard safety requirement that every person who is participating in the laboratory experiments or engage in any other activities in the laboratory MUST wear appropriate safety gears (PPE) as listed below for this particular equipment;

- Dust mask
- Ear muffs/plugs
- Clear safety glass
- Safety boots
- Elbow rubber gloves
- Cotton hand gloves

**APPARATUS & MATERIALS REQUIRED**

- Compressed air supply
- Bench top electronic balance
- Metal scoop
- Spatula
- Sample trays
- Lab funnels
- Plastic bags
- Plastic buckets

**STANDARD OPERATING PROCEDURE (SOP)**

**Prestart Check**

1. Ensure that the work area is clear of any obstructions that may cause safety hazard in the work area
2. Check that the air compressor is switched on to pressurize the equipment parts where necessary. Ensure compressed air valves are turned on is not leaking
3. Open the pulveriser door to check for any defects or its cleanliness from the last operation
4. Turn on the main power supply switch on the wall

## Operation of the LM5 PULVERIZER

5. Remove the LM5 PULVERIZER cabinet lid
6. Place the required weight of sample into the sample chamber
7. Place the metal disk over the sample and press it down. The metal disk must be below the top of the sample chamber in order for the lid to fit safely
8. Place the lid over the sample chamber
9. Pull clamp arm to normal operating position
10. Close the door/lid
11. Reset the RED button – pull mushroom head to the up position
12. Set the required grinding time on the timer according to the laboratory test procedure
13. Press the GREEN button and HOLD until the clamp has operated and the pulveriser starts, then release the button
14. The mill will stop when the SET time has elapsed. (The mill can also be stopped by pushing the RED stop button down or lifting the door/lid)
15. Ensure mill is stopped and clamp is released
16. Open the cabinet door/lid
17. Push the clamp arm down and move it back to remove the mill lid
18. Using the mill mate lifting jib carefully lift the metal disk out of the bowl ensuring no samples are spilled over
19. Remove ground sample using a scoop into a plastic bag or a bucket
20. Clean the mill with brush followed by compressed air blow gun
21. Return metal disk to the bowl using the mill mate lifting jab
22. Close the pulveriser door/lid
23. Switch OFF the air compressor
24. Switch OFF the main power supply on the wall
25. Do HOUSEKEEPING to ensure the work area is clean and safe before leaving