

# STANDARD OPERATING PROCEDURE (SOP) Ro TAP RX-29-10 SIEVE SHAKER



## **OBJECTIVE**

This Standard Operating Procedure (SOP) is specifically designed for the purpose of safe operation of the LABORATORY equipment '**Ro TAP RX-29-10 SIEVE SHAKER**'. 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 the operation.

## **HAZARDS**

- Moving parts – Moving parts may snag onto loose fitting clothing and cause injury to personnel
- Compressed air – Use of compressed air under very high pressure
- Ergonomics – Improper stance during sample loading and unloading may cause server muscle strain or back injury
- Noise – As the sieve shaker is mounted on an open stand without a sound proof cabinet, the noise created is moderately high that could induce stress or hearing impairment over an extended period of exposure

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

The following safety gears must be worn when operating the Ro TAPRX-29-10 SIEVE SHAKER. 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 Personal Protective Equipment as listed below for this particular equipment;

- Dust mask
- Clear safety glass
- Safety boots
- Rubber hand gloves
- Ear muffs or plugs

## **APPARATUS & MATERIALS REQUIRED**

- Bench top electronic balance
- Metal scoop
- Spatula
- Sample trays
- Lab funnels
- Plastic bags
- Paint brush
- Note pad and biro

## **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. Select a set of sieves with the coarsest sieve opening at the top with a pan at the bottom
3. Ensure that the sieves are clean from any locked particles in the sieve apertures that will affect the sieving efficiency
4. Turn on the main power supply switch to the Ro Tap Sieve Shaker on the wall socket

When excessive particles are locked in the sieve openings, screen binding occurs.  
Using blind sieves to carry out size analysis will cause erroneous results

### **OPERATION OF RO TAP SIEVE SHAKER**

5. Place the set of sieves in the sieve shaker with the hammer tilted up and out of the way
6. Place the sieve cover over the net of sieves ensuring that the cover flashes with the upper carrying plate, then lower the hammer
7. Set the test time run by pushing the UP and DOWN arrow keys on the timer until the desired duration time appears on the digital window
8. Push the START button to begin the test
9. An audible tone will be heard when the set time has elapsed and the shaker will STOP automatically
10. Tilt the hammer up and out of the way, remove the net of sieves and carefully lift the sieve net to the bench near an electronic balance
11. Weigh the retained particles on each sieve and stake up the empty sieves away
12. The size fractions can be packed into a labelled plastic bags for further tests or discarded as per conditions of the laboratory test procedure
- 13.
14. Place the Winchester bottle containing the slurry pulp sample onto the roller
15. Connect the 3phase power cable to the wall power socket and screw on tightly
16. Switch 'ON' the 3phase main power supply on the wall
17. The double deck rollers will start rolling which will then force the Winchester bottle(s) to roll with the roller direction
18. In the event of a power failure, please switch OFF the main power supply switch
19. Switch it ON when the power stabilizes after 1 minute. (This is to protect the roller motor from any electrical damage due to power surge when power comes back on)
20. DO NOT remove sample bottle(s) while the roller is in operation. Remove sample bottle(s) after the roller is switched OFF
21. Do HOUSEKEEPING around the work area before you leave