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Diploma in Pharmacy 1st Year
Pharmaceutics
Experiment
To demonstrate the friability testof the tablets as per the monographs.

Aim:

To demonstrate the friability testof the tablets as per the monographs.

Reference :

‘ Dr. Gupta G.D , Dr. Sharma Shailish , Dr. Sharma Neelam’ “Practical Manual of Pharmaceutics” Published by Nirali Prakashan, Page no 136 – 139

Apparatus and Materials Required :

Tablets and Roche friabilator.

Theory :

Friability test is performed to evaluate the ability of the tablets to withstand abrasion in packing handling and transporting The instrument used for this test is known as friability test apparatus or friabilator.

Fnability of a tablet can be determined in laboratory by Roche Friabilator (figure 12) This consists of a plastic chamber that revolves at 25rpm The tablets are dropped from a distance of 6 inches in the friabilator which is then operated for 100 revolutions. The tablets are reweighed and friability (F) is calculated as:

$$F = \frac{W_{intial} - W_{final}}{W_{intial}}$$

Tablet that lose less than 0.1-0.5 % of the tablet weight is considered acceptable

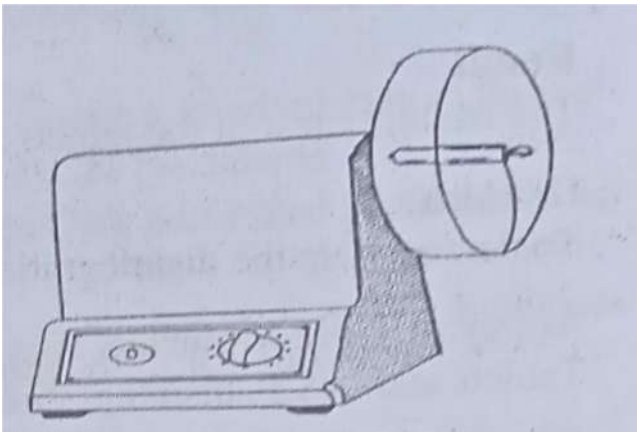

Figure 12: Roche Friabilator

Procedure

1. The cleanliness of the equipment should be checked.
2. The instrument should be switched on, drum should be initialised itself to the loading position, the display should now show START.
3. Weight of the tablet should be weighed and recorded..
4. 20 tablets should be taken if individual tablet weight is up to 0.650 g and 10 tablets should be takenif individual tablet weight is above 0.650 g.
5. The counts should be adjusted to 100 by pressing the COUNT key followed by '1', '0', '0' keys (Count range 1 to 99999).
6. ENTER key should be pressed to confirm the reading.
7. COUNT key should be pressed to see and confirm the number of counts.
8. On confirming the number of counts RUN/HALT key should be pressed to start, the display that shows the elapsed count.
9. Test can be performed by adjusting "TIME similarly as "COUNT".
10. When test is over drum should rotate in reverse direction for discharging the tablets in the tray.
11. The test over should be indicated by an audible beep and display should show END.

12. The drum should initialise itself to loading position and display should show START indicating the instrument is ready for the next run.
13. The tablets should be removed from the tray.
14. The tablets should be de-dusted and weighed and the weight of the tablets should be noted down.
15. The percentage loss in the weight should be calculated by using the formula.
16. The drums should not be held while rotating.
17. The tablets should be destroyed after testing.

Result :

The friability test of the tablets as per the monographs was performed.

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