

Defects in tablets

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MANUFACTURING DEFECTS IN TABLETS

- CAPPING
- PICKING & STICKING
- MOTTILING
- WEIGHT VARIATION
- HARDNESS VARIATION
- DOUBLE IMPRESSION

CAPPING

- Means, partial or completely remove of top or bottom portion of the tablet.
- **Reasons:**
 - ✓ Excessive fines in granules.
 - ✓ Defective punches & dies.
 - ✓ High speed of tablet machine.
 - ✓ The granules are too dry.
- **Defects can be overcome by:**
 - ✓ Reduce the % of fines
 - ✓ Defective punches should be replaced or polish before use.
 - ✓ Regulate the speed of tablet machine.
 - ✓ Maintain moisture content.



PICKING & STICKING

- Means, picked the material by upper punch & sticking case, stick the material to wall of the die.
- **Reasons:**
 - ✓ Use of small qty. of lubricants
 - ✓ Defected punch & dies used
 - ✓ Presence of moisture content in granules.
- **Defects can be overcome by:**
 - ✓ A new set of die & punches.
 - ✓ Use of required qty. of lubricant
 - ✓ Use dry granules.

MOTTLING

- Means, unequal distribution of colours on tablet surface.
- **Reasons:**
 - ✓ Not properly mix colours with granules
 - ✓ Use of different coloration of medicaments & excipients.
 - ✓ Migration of dye in the granules during the process of drying
- **Defects can be overcome by:**
 - ✓ Drying the granules at low tempr.



WEIGHT VARIATION

- **Reasons:**

- ✓ Granules are not in uniform size.
- ✓ No proper mixing of lubricants.
- ✓ No uniform flow of the granules from the hopper.
- ✓ Use of excess amount of fine powder.

- **Defects can be overcome by:**

- ✓ Use of required qty. of lubricant
- ✓ Reduce the % of fines
- ✓ Regulate the speed of tablet machine.

DOUBLE IMPRESSION

- This defect occurs when the lower punch has a monogram or some other engraving on it.
- Due to some defect in the machine, lower punch moves slightly upward before ejection of a tablet & gives second, though light, imprint on the tablet.
- This defect can be overcome by controlling the undesirable movement of the lower punch.



Thank you!