

TROUBLESHOOTING COMMERCIAL PRODUCTION

How would your company like to increase product yields and reduce batch losses during commercial tablet production? Do you need to improve your tablet machine efficiency? Read on to find out how the scientists at Merlin Powder Characterisation can help

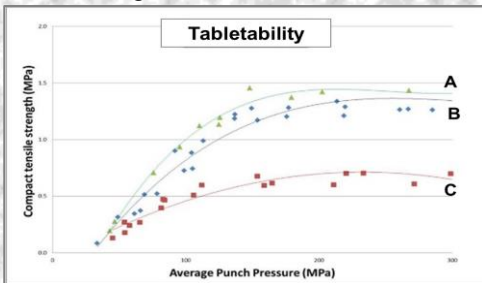
We can help you improve your production yields and reduce wastage by :-

- Using as little as 20 g of powder blend to investigate the possible causes of your tableting defects.
- Investigating whether your powder blend is prone to capping/lamination, picking and sticking.
- Assessing the key functional properties of your powder blends at production speeds. Use compaction science to identify possible solutions to the problem that are acceptable from a regulatory point of view.
- Measuring powder flow if your batch losses are due to tablet weight - out of specification.

How do we do it?

Compactability and Tableability tests – To understand causes of poor performance:

- Using a Phoenix hydraulic Compaction Simulator to assess compacts across a range of compression conditions.
- Punch pressure and tensile strength are measured. This information gives an understanding of the key properties of the material or formulation which affect tableability.
- Ejection force and ejected compact density are measured. This information identifies the possible causes of tableting issues.



Shows how the tablet blends behave across the whole of its compressibility range. May show physical capping and lamination or a reduction in crushing strength.



Capping of a tablet

Example Case Studies

Case Study 1

A batch of tablet X is worth £100,000:

- It's currently losing 5% of yield to capping problems
- Cost of the problem = £5,000 per batch
- Reduce the loss in yield to 3% by better process control i.e. reducing speed of production press, force of compaction

✓ **Cost saving of £2,000 per batch**

Case Study 2

- The compression process should take 3 hours but regular intervention is required to clean the punches due to sticking and poor process control.
- Downtime is approx. 2 hours of cleaning and lost yield per batch. Operator cannot leave the tableting press unattended as picking results in tablets that cannot be sold.

✓ **Cost and time saving of ££££s.**

If you are experiencing tableting issues during commercial production and would like advice on how to overcome them, please e-mail: info@merlin-pc.com

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