CASE STUDY

Merlin powder characterisation

FORMULATION DESIGN DEVELOPMENT AND SCALE-UP

Do you need help to design more robust tablet formulations? Want to know how to improve your formulation blends during scale-up? Read on to find out how the scientists at Merlin Powder Characterisation can help …..

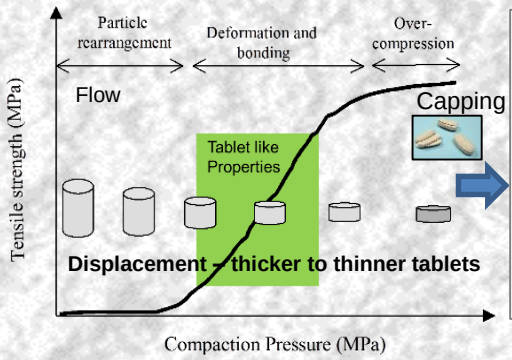
We can help you design more robust tablet formulations by :

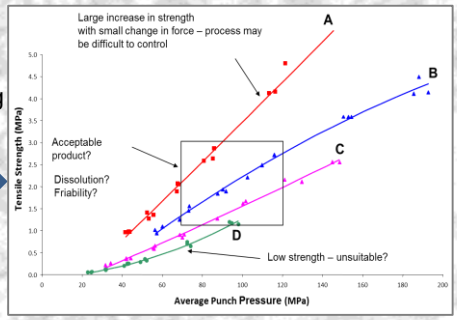
- Using as little as 20 g of powder blend to assess scale up suitability of early prototype formulations.
- Screen DoE batches to provide tabletability data for statistical analysis. Get the most out of small batch sizes.
- Assess the key functional properties of your blends.
- Discover if the formulation is suitable for commercial production and act early if its not.

How do we do it?

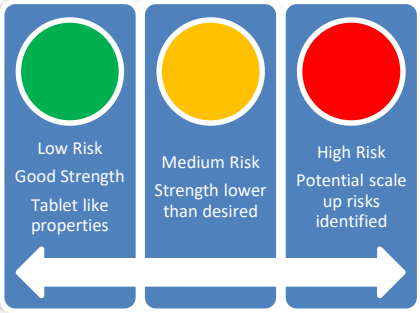
Compactability and Tabletability Tests:

- Phoenix hydraulic Compaction Simulator is used to produce compacts across a range of compression forces. We can compare different variables and assess the impact e.g. formulation changes, process changes, environmental effects.
- Tensile strength is measured to assess the bonding within the compact. If the compact is of a low strength it will impact on key quality attributes and reduce the chances of a successful scale up.





Data will produce 'finger-prints' for each batch tested. This information can be processed to yield values for compression to understand the product.



Identify formulation risks to aid development.

Example Case Study

- Formulation screening on 3 lead formulations showed that two had the potential to compress at production speeds.
- Concentrate efforts on lead formulation and one back-up.
- Compaction predictions reduced number of scale-up batches required and associated analytical costs.
- Choosing scalable formulation removed need for reformulation at Phase II and bioequivalence study.

✓ **Project time and cost saving of 3 Months development time!**

If you are experiencing formulation design and scale-up issues and would like advice on how to overcome them, please why not contact us for further information.

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