

TABLETING 101

Summary

This course focusses on giving a thorough but basic **introduction** about the tableting process in an interactive manner. During this course, the basic aspects of the tableting equipment, tablet formulation, tablet quality, tableting process and compaction mechanisms and models will be clearly explained from a theoretical point-of-view. Furthermore, hands-on sessions will allow the trainee to get a feel with the tableting process and how this process can be influenced by divergent factors.

This course is divided into two separate modules::

- 1) **Module 1: Basic introduction to the tableting process (1/2-day)**
- 2) **Module 2: Deeper dive into specific tableting aspects (1/2-day)**

Target audience:

Module 1

- People with no experience/expertise in the topic.
- People that are looking for a refreshment on the basic principles.

Module 2

- People with an understanding of the basic principles of the process that want to have a more in-depth knowledge on specific aspects.

MODULE 1: BASIC INTRODUCTION TO THE TABLETING PROCESS

Theoretical

General introduction to tableting

- a. Basic fundamentals
- b. What is a tablet formulation?

What encompasses the tableting process?

- a. What is die filling?
- b. Which compaction mechanism/models exist?

Theory through practice

What is a compaction simulator and how does it compare to an industrial rotary tablet press?

- a. Material processing on a rotary tablet press
 - i. How to set-up a rotary tablet press?
 - ii. Explanation of all parts
 - iii. Tablet production
- b. Material processing using a compaction simulator
 - i. What is a compaction simulator?
 - ii. Setting up an experimental run
 - iii. Tablet production

Tablet Quality

- a. *Quality determination of the produced tablets*

MODULE 2: DEEPER DIVE INTO SPECIFIC TABLETING ASPECTS

Use-case 1: Die filling on a rotary tablet press

- a. How is die filling impacted by material/blend properties?
 - i. Two divergent blends will be used as a showcase
- b. How can you improve the processability?

Use-case 2: Sticking

- a. Which types of sticking do exist?
- b. How do they impact the process?
- c. How can you measure and avoid it?

Use-case 3: lubrication

- a. How can lubricants help during compression?
- b. Internal vs. external lubrication?

Use-case 4: Compaction models

- a. What is the added benefit of the different compaction models?