

# Introduction to Tablet Manufacturing by the Direct Compression Process

DIRECTED BY

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ACCREDITED  
COURSE

- The Rotary Die Process for Making Tablets
- Direct Compression (DC) Process
- Mixing and Mixture Designs
- Formulation and Material Requirements for Tableting and Direct Compression
- Handling and Press Feeding System to Prevent Segregation
- Methods for Investigation of Content Non-Uniformity

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## about the course

Solid oral dosage forms such as tablets and capsules represent the most common type of pharmaceutical products produced. In the patient's hand, a tablet can seem like a simple product, not knowing there are numerous complexities that go into its manufacture. But for the manufacturer, without a clear understanding of the science behind the ingredients or the expertise in the granulation and compression process, unacceptable finished products may be produced.

The main purpose of this 2-hour accredited training course is to provide an introductory review of the process of making tablets. Once the tablet process requirements are understood, the material needs for both tableting and mixing are covered. The focus on mixing is by Direct Compression process. Here the course deals with mixture designs, mixing strategies, and mixture design verification. Handling and feeding systems are discussed with the target of prevention of segregation. The course concludes with generating tablet design verification data and development of failure investigation strategies.

Since this training is highly interactive, those attending the live training event must have a webcam on their computer as well as a microphone and speakers/headset in order to fully participate.

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## who should attend

This 2-hour course is intended for all scientists and technologists interested in developing a basic understanding of the critical process, materials and in-process test used in the manufacturing of tablets by direct compression and failure investigation.

The material will be presented in such a way as to be of value to a varying level of expertise. This course will especially benefit those in:

- Regulatory Affairs
- Validation
- R&D
- Suppliers
- QA/QC
- Manufacturing
- Engineering

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## learning objectives

**Upon completion of this course, you will be able to:**

- Describe the basic design, development, and processes involved in the manufacturing of contemporary tablets by direct compression.
- Conduct investigation more effectively using design verification data and developed investigation strategies.

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## course outline

### Review of Learning Objectives

#### Module 1

- Rotary Die process, process requirements, and controls
- Direct compression process: Mixture design and mixing strategies

#### Module 2

- Handling and segregation prevention
- Tablet design verification
- Failure investigation strategies

**Optional:** 30-Minute Question and Answer Session

#### Assessment Opportunity

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## course instructor

**Dr. Cecil W. Propst** is Managing Director at Propst Consulting Services, a formulation and engineering support LLC located in Norton Shores, MI. He was Director of R&D (Grand Haven site) at SPI Pharma until 2015. He served as Director of Quality Assurance and Technical Services at Fleming and Company and, before that, as President of Manufacturing Chemists. His duties included system design, product and process development and regulatory affairs. Previously, he served as cGMP Facilities Director for the University of Maryland at Baltimore, in connection with the University's SUPAC contract with the FDA. Dr. Propst also served as Director of Technical Development for Stellar Manufacturing; Director of Quality Compliance for SmithKline Beecham; Director, Quality Assurance for Norcliff Thayer (a Revlon Company); and Group Leader/Product Development and Manager/Quality Control for Lewis Howe Company. He serves as a consultant in the area of product development and process investigations for the chemical, diagnostic, food, engineering and beverage industries.

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## Accreditations



### **International Accreditors for Continuing Education and Training (IACET )**

Cobblestone has been approved as a CEU Accreditor by IACET and awards CEUs for participation in qualified courses. Cobblestone has demonstrated that it complies with the ANSI/IACET Standards and is authorized to offer IACET CEUs for its programs. CEUs will be awarded for participation in Cobblestone's courses at the rate of .1 CEU per contact hour upon successful completion of the entire course and 70% accuracy in the required Learners' Assessment. A minimum score of 80% is required for all courses within a Cobblestone Certification Program. This course offers a total of **2** contact hours, or **.2** CEUs. For further information, visit [www.iacet.org](http://www.iacet.org)



### **The American Institute of Chemists (AIC)**

The National Certification Commission in Chemistry and Chemical Engineering was formed in 1977 to recognize practitioners who strive to maintain their professional competence through participation in continuing education. The program encourages various means by which practitioners can maintain and improve their skills. It also serves as a vehicle for formally recognizing educational programs and other professional related activities that are dedicated to advancing the chemical scientist's or engineer's current competence in his/her discipline. This and many other CfPA courses offer training that may be helpful in obtaining required AIC recertification education units.

A list of recommended courses can be found on <https://www.cfpa.com/Accreditation/AccreditationView/AIC>.

For more information, visit: [www.theaic.org](http://www.theaic.org)