

Exploration of Pilot Plant Scale Up Consideration For Solids

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Abstract: *Pilot Plant - It can be understood as a small- scale production system or a pre-commercial system of the giant pharmaceutical industry. Here, a small preliminary lab-scale formula is developed and transformed into an operational product by the development of the liable and practical procedure of manufacture.*

Scale-up The art designing of a prototype to increase the batch size of a product using the data obtained from the pilot plant model.

Before investing a large sum of money on a production unit this small preliminary lab-scale formula can be carried out on a model of the proposed plant.

To conduct an examination of the formula to check its robustness and ability to withstand large scale or Batch-scale production and if process modification is needed. To conduct an evaluation of equipment and process validation.

Evaluation of a product and process validation on an intermediary scale can be carried out by a pilot plant setup before investing large amounts of money to full- scale production. It is not feasible to predict the effects of a many-fold increase in the scale of batch production without a pilot plant study. It is beyond everyone's scope to design a large-scale manufacturing unit from laboratory data alone without any degree of relevant success.

Keywords: Pilot plant, scale up, production, TAM, tablet, granulation, slugging and blending

REFERENCES

- [1]. Lachman Libermans " The Theory and practice of Industrial Pharmacy" 4th edition, 2020, CBS Publishers and Distributor Private Limited.
- [2]. Tripathi D K " Industrial Pharmacy A Comprehensive Approach" 3rd edition, 2017, Pharma Med Press.
- [3]. Dr. K.P. Sampath Kumar, Dr. Debjit Bhowmik, Rishab Bhanot and Shambaditya Goswami "Industrial Pharmacy II" 4th edition, 2022, Nirali Prakshan.
- [4]. Ajay Semalty "Industrial Pharmacy I" 1st edition, 2022, Pharma Med Press.
- [5]. <https://www.pharmaguideline.com/2021/07/pilot-plant-scale-up-considerations.html?m=1>
- [6]. <https://www.slideshare.net/DauRamChandravanshi1/pilot-plant-techniques-for-solid-dosage-forms>
- [7]. https://www.academia.edu/8939649/PILOT_PLANT_SCALE_UP_TECHNIQUES_CONTENTS_INTRODUCTION_ON_PILOT_PLANT_AND_SCALE_UP