Chapter 7
Production Process in the Pharmaceutical Industry

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ABSTRACT

The most important stress related to the industrialized societies are diseases and health issues caused by taking medicines that are in unfavorable condition. The health issues caused due to the medications mainly depend on the quality of drugs. This is the main test confronted by any pharmaceutical organization wishing to guarantee its survival. The benefit in the pharmaceutical industries is higher. But now, the cost of the medicines is reduced as per the estimation is given by the government. Hence, pharmaceutical organizations now confront a moment of challenge to diminish costs through upgrading and enhancing their production methods. Based on the production process following in the pharmaceutical industries, the product quality can be varied and improved. This chapter prescribes the detailed information regarding the production practices that are followed in the pharmaceutical industries for the production of high-quality products.
INTRODUCTION

Pharmaceutical industries bring out the major changes in the developed countries as well as in developing countries. Pharmaceutical industries use chemical materials for the production of antibiotics through research and development investment, which was useful to both the animals and humans. They tend to produce a profit source for the next generation and less expensive drugs that increase the enterprise value (Lee & Choi, 2015). Pharmaceutical industries get involved in the production of pharmaceuticals that represses the contaminants and infections of the living creatures. The pharmaceutical enterprises grew new methodologies in advances, explore fields and framework. The drug produced by the pharmaceutical industries contains various toxicological properties and therapeutic activity. Advancement in the research and technology innovation prompts the discovery of new pharmaceuticals that aid in the diminishment of symptoms. The manufacturing techniques of pharmaceuticals include two major processing techniques namely primary processing and secondary processing. In the primary processing, active drug production takes place and in the secondary processing, the alteration of the drug takes place and converts them into a good product for administration. These drugs inhibit the infections and diseases of the living beings. The manufactured pharmaceutical groups include patented products like Proprietary ethical products or prescription only medicines (POM), general ethical products and over-the-counter (OTC), or non-prescription products.

The entire pharmaceutical part is in need of creative technological solutions and basic scientific work which empowers in the generation of highly engineered drug materials. The product development process in the pharmaceutical industries includes logical and systematic process. The dosage form is created based on the successful outcome. Due to a deficiency in the control steps of product production, the above-mentioned developmental process becomes difficult. Based on the risk, regulatory demands are increasing rapidly in which the pharmaceutical industries are trying to change and match with the regulatory measures. The achievement of the pharmaceutical industry is due to the increase in population, high sale of drugs in the pharmaceutical industries and product innovation to treat various diseases. Research and development labs play out the work of medication discovery and improvement while fabricating plants create the final medications for purchasers. Most R&D research facilities are found independently from assembling plants, yet a few labs and generation plants are incorporated. In order to safeguard the characteristics of quality of the product regulatory conditions were developed which regulates the manufacturing process of products in the pharmaceutical and similar industries (Rantanen & Khinast, 2015). This chapter gives a short description of the production methods along with significance and limitations.
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