

ABSTRACT

An Ideal Composition of Pellet Core and Coating Layer for Tableting Multiple Pellet System (MUPS) *Literature Review*

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Compacting multiple unit pellet system (MUPS) into tablet offers some advantages over capsule. But compacting MUPS without altering its release profile is the most challenging task. The Problem solving strategy is to improve the integrity of pellet through optimization of the core and coating layer of pellet. Therefore, the aim of this study is to explain an ideal composition of pellet core and coating layer for tableting multiple unit pellet system (MUPS). This study is conducted by searcher articles on 3 online databases i.e PubMed, google scholar, and science direct. Total articles obtained are 1820 articles. The next steps are followed by duplication checking and screening by years, title, abstract, and full text. The final articles to be reviewed are 13 articles and the next step is followed by data extraction. Data extraction include composition for pellet core and coating layer, mechanical strength of pellet and MUPS tablet and evaluation for MUPS such as disintegration time and dissolution profile. Those datas are analyzed qualitatively and shows some informations. From those informations, conclusions can be drawn that there is two type of pellet core, inert core and matrix core. For inert core, an ideal composition contain of plastic material such as MCC *sphere*. Meanwhile for matrix core better contain a combination of plastic and brittle material such as combination of MCC and lactose monohydrate. Meanwhile for coating layer is made of elastic polymer such as polivinil or co-polymer acrylate.

Keywords: Multiple unit pellet system, MUPS tablet, compacted pellet, pellet coating