

*International Conference on***PHARMACEUTICAL AND BIOMEDICAL ENGINEERING***October 16-17, 2017 Osaka, Japan***The potential of corn starch (*Zea mays* L.) as an alternative basic ingredient of capsule shell****Wintang Dayinta Tanaya Hutami, Suroya I E, Ratri N W, Yadanta P M and Nirwingsyah N R**
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Capsules are solid forms which can be used to reduce the drug odor, to protect the capsule content from air and light and especially to release the capsule contents to intended site. The basic ingredients of capsule usually come from the gelatin which is produced from skin collagen and animal bones. Some religions in the world prohibit the consumption of animals; therefore capsule shells from non-animal based are required. One of them is corn starch, contains amylopectin which is polysaccharide that can be used as base ingredient of hard capsule shell. The formulation which was used in this study consisted of three treatments: Amylopectin with concentration of 3%, 4% and 5%. The best amylopectin formulation is seen from the parameters of viscosity, moisture content and disintegration time. The amylopectin concentration significantly affects the disintegration time and viscosity of the capsule shell forming solution, but does not affect the moisture content of the capsule shell. The best formulation was found in the capsule shell with 5% amylopectin concentration which had viscosity of 5,700-9,566 cP, water content of 16.03% and crushed time 19.23 minutes.

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