Pembuatan mikropartikel ekstrak kunyit curcuma domestica val dengan penyalut hidroksipropil metilselulosa menggunakan fluidized bed = Preparation of microparticles turmeric extract curcuma domestica val coated hydroxypropyl methylcellulose by fluidized bed / Jennifer Christie

Jennifer Christie, author

Abstrak

[Kurkumin merupakan pigmen berwarna jingga kekuningan yang dapat mengalami dekomposisi struktur apabila terkena cahaya. Hal ini menyebabkan senyawa kurkumin menjadi tidak aktif. Salah satu upaya untuk mempertahankan kestabilan kurkumin ini adalah dengan penyalutan lapis tipis. Tujuan dari penelitian ini adalah membuat mikropartikel ekstrak kunyit dengan hidroksipropil metilselulosa (HPMC) menggunakan fluidized bed. Proses penyalutan dilakukan pada ekstrak kunyit 35 mesh (F2) dan 60 mesh (F3) dengan penyalut hidroksipropil metilselulosa (HPMC) 0,5%. Hasil SEM menunjukkan permukaan halus dan glossy pada formula F2 dan F3. Mikropartikel ekstrak kunyit diuji stabilitasnya di bawah pengaruh suhu; sinar matahari; sinar UV 254 nm; dan sinar lampu. Pada formula F2 diperoleh perubahan kadar berturut-turut sebesar 0,09%; 1,62%; 0,09%; dan 0,15%. Pada formula F3 diperoleh perubahan kadar berturut-turut sebesar 4,88%; 9,35%; 3,32%; dan 3,84%. Proses penyalutan ekstrak kunyit dengan hidroksipropil metilselulosa menggunakan fluidized bed belum memberikan hasil yang optimal secara fisik serta penyalutan ekstrak kunyit dengan hidroksipropil metilselulosa dapat meningkatkan kestabilan dari pengaruh suhu dan cahaya. ..... Curcumin is yellow-orange pigment. The structure of curcumin can be decomposed when exposed to light, which causes the compound of curcumin becomes inactive. To maintain the stability, curcumin has performed thin film coating. This research was intended to produce microparticles of turmeric extract coated hydroxypropyl methylcellulose by fluidized bed. The coating process is performed on curcumin extract 35 mesh (F2) and 60 mesh (F3) with 0,5% hydroxypropyl methylcellulose (HPMC) polymer. SEM results showed that formulation F2 and F3 have smooth surface and glossy. Microparticle of curcumin extract has been exposed at certain temperature condition, sunlight, UV 254 nm light, and light. F2 formulation is obtained change of assay consencutively by 0,09%; 1,62%; 0,09%; and 0,15%. F3 formulation is obtained change of assay consencutively by 4,88%; 9,35%; 3,32%; and 3,84%. Coating process of curcumin extract with hydroxyprophyl methylcellulose by fluidized bed, not provide optimal physically results yet. Coating of turmeric extract with hydroxypropyl methylcellulose could increases the stability of curcumin that affected by temperature and light exposure., Curcumin is yellow-orange pigment. The structure of curcumin can be
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