

## INTISARI

Penelitian tentang amilum – Avicel PH 101<sup>®</sup> sebagai penghambat migrasi eosin B dalam granulnya telah dilakukan. Penelitian ini bertujuan untuk mengetahui profil koefisien migrasi eosin dalam granul yang menggunakan amilum, Avicel PH 101<sup>®</sup> dan campuran keduanya.

Penelitian ini termasuk jenis penelitian eksperimental murni dengan desain *Simplex Lattice* menggunakan 2 faktor yaitu amilum dan Avicel PH 101<sup>®</sup> sebagai bahan pengisi granul eosin B. Berdasarkan desain tersebut ditetapkan 3 formula yaitu (1) yang menggunakan 100% amilum (amilum 100 gram), (2) yang menggunakan 100% Avicel PH 101<sup>®</sup> (Avicel PH 101<sup>®</sup> 100 gram), (3) yang menggunakan 50% amilum (amilum 50 gram) – 50% Avicel PH 101<sup>®</sup> (Avicel PH 101<sup>®</sup> 50 gram) eosin B yang digunakan 0,12 gram. Ketiga formula granul eosin B dibuat secara granulasi basah dengan larutan gelatin 10% dalam jumlah yang sama (40 ml). Setelah dilakukan uji homogenitas granul basah dan distribusi ukuran granulnya, ketiga granul tersebut dikeringkan dalam *oven* pada suhu 50°C selama 22 jam dalam sel pengering kemudian dihitung koefisien migrasi eosin B. Berdasarkan percobaan dengan desain tersebut diperoleh persamaan  $Y = 0,013(A) + 0,028(B) + 0,112(A)(B)$ , dimana Y = nilai koefisien migrasi eosin B, (A) = bagian amilum, (B) = bagian Avicel PH 101<sup>®</sup>.

Hasil penelitian menunjukkan bahwa profil koefisien migrasi eosin B *versus* komposisi campuran amilum – Avicel PH 101<sup>®</sup> berupa garis melengkung kebawah. Amilum relatif lebih kuat menghambat migrasi eosin B daripada Avicel PH 101<sup>®</sup>. Adanya campuran antara amilum dan Avicel PH 101<sup>®</sup> dengan proporsi amilum dibawah 80% dan Avicel PH 101<sup>®</sup> diatas 20% akan menurunkan penghambatan migrasi eosin B baik oleh amilum maupun oleh Avicel PH 101<sup>®</sup>.

Kata kunci : amilum, Avicel PH 101<sup>®</sup>, eosin B, penghambat migrasi, koefisien migrasi

### ABSTRACT

The research of amilum – Avicel PH 101<sup>®</sup> mixture as migration inhibitor of eosin B in its granules mass has been done. The aim of the research was to know the profile of the coefficient migration of eosin B in the granules mass using amilum, Avicel PH 101<sup>®</sup>, and their combinations.

The research was a pure experimental with *Simplex Lattice* design using 2 factors, i.e amilum and Avicel PH 101<sup>®</sup> as the eosin B granule filler. According to the design 3 formulas were decided, there were formula using 100% amilum (100 gram), 100% Avicel PH 101<sup>®</sup> (100 gram), and mixture of 50% amilum (50 gram) - 50% Avicel PH 101<sup>®</sup> (50 gram) uspectively. Those 3 formulas each was made by wet granulation with gelatin solution 10% as granule binder in same amount of 40 ml, the amount of eosin B in each formula was 0,12 gram. After the wet granules homogeneity and distribution of granule size were evaluated, then the granules were dried in the oven at 50°C for 22 hours in the drying cell. The coefficient migration of eosin B was calculated. According to the data of the design an equation of  $Y = 0,013(A + 0,028(B + 0,11(A)(B))$  was yielded, where Y is the coefficient of migration of eosin B, (A) is amilum proportion, and (B) is Avicel PH 101<sup>®</sup> proportion.

The result of the experiment showed that the profile of coefficient migration of eosin B versus amilum - Avicel PH 101<sup>®</sup> mixture composition was an downward opened unstraight line. Amilum relatively inhibited the migration of eosin B stronger than Avicel PH 101<sup>®</sup>. The mixture of amilum and Avicel PH 101<sup>®</sup> with amilum proportion under 80% and Avicel PH 101<sup>®</sup> above 20% reduced the inhibition of eosin B migration by amilum and Avicel PH 101<sup>®</sup> as well.

Keyword : amilum, Avicel PH 101<sup>®</sup>, eosin B, migration inhibitor, coefficient migration