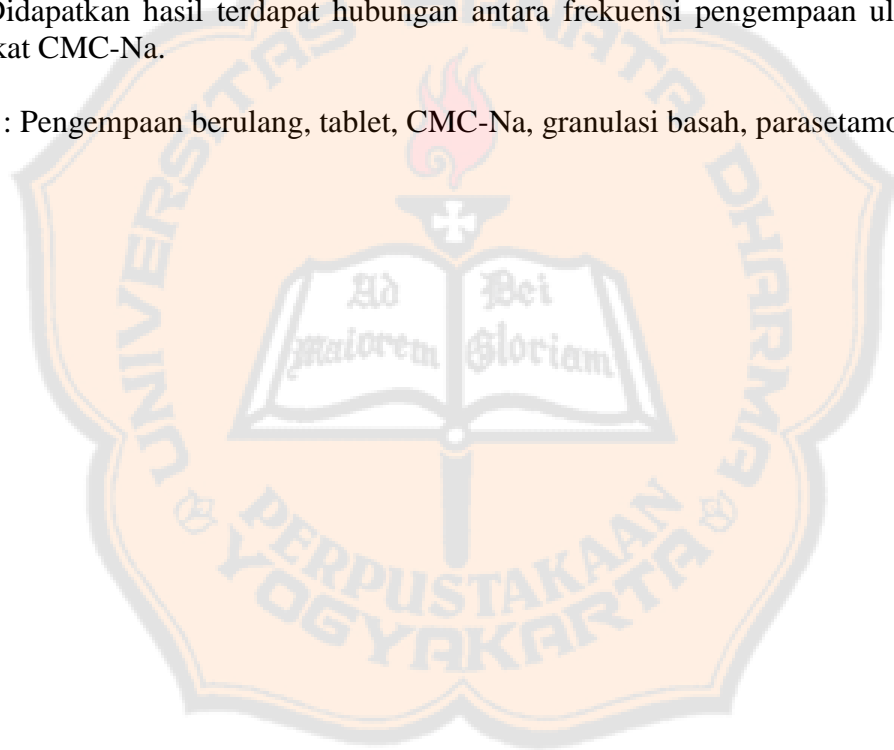


ABSTRAK

Bahan pengikat merupakan bahan yang penting dalam pembuatan tablet dengan metode Granulasi Basah. Salah satu bahan pengikat yang dapat digunakan dalam pembuatan tablet adalah *Carboxymethylcellulose Sodium* (CMC-Na). Penelitian dilakukan untuk mengetahui kemampuan bahan pengikat untuk dapat mempertahankan kemampuannya setelah dilakukan pengempaan berulang. pengempaan dilakukan sebanyak tiga kali pada setiap formula dengan tingkat bahan pengikat yang berbeda. Formula yang digunakan berupa *Carboxymethylcellulose Sodium* (CMC-Na) 3% dan 5%. Potensi pengerjaan ulang (*Reworking potential*) bahan pengikat diukur berdasarkan sifat fisik campuran dan sifat fisik tablet parasetamol. Penelitian termasuk dalam eksperimental murni dengan rancangan penelitian acak lengkap pola dua arah. Data tidak terdistribusi normal diuji dengan uji *Kruskal-Wallis*. Pengujian dilanjutkan dengan uji *Post-Hoc Mann Whitney* untuk mengetahui ada tidaknya perbedaan dalam kelompok. Berdasarkan hasil diketahui bahwa terdapat pengaruh frekuensi pengempaan ulang dan kadar CMC-Na terhadap sifat fisik campuran dan sifat fisik tablet dilihat berdasarkan hasil statistika yang berbeda bermakna. Didapatkan hasil terdapat hubungan antara frekuensi pengempaan ulang dan kadar bahan pengikat CMC-Na.

Kata Kunci : Pengempaan berulang, tablet, CMC-Na, granulasi basah, parasetamol.



ABSTRACT

Binder is an important ingredient in making tablets using the Wet Granulation method. One of the binders that can be used in making tablets is Carboxymethylcellulose Sodium (CMC-Na). Research was conducted to determine the ability of the binder to maintain its properties after repeated compression. Pressing was carried out three times for each formula with different levels of binder. The formula used is Carboxymethylcellulose Sodium (CMC-Na) 3% and 5%. The reworking potential of the binder is measured based on the physical properties of the mixture and the physical properties of the paracetamol tablet. The research was purely experimental with a two-way completely randomized research design. Data not normally distributed were tested using the Kruskal-Wallis test. Testing was continued with the Post-Hoc Mann Whitney test to determine whether there were differences in the groups. Based on the results, it is known that there is an influence the frequency of repeated compression and CMC-Na content on the physical properties of the mixture and the physical properties of the tablets based on statistical results which are significantly different. The results showed that there was a relationship between the frequency of repeated compression and the content of the CMC-Na binder.

Keywords: Repeated compression, tablets, CMC-Na, wet granulation, parasetamol.

