INTISARI

Telah dilakukan penelitian dengan judul "optimasi komposisi asam sitrat dan asam tartrat dalam tablet *effervescent* vitamin C: aplikasi metode desain faktorial". Penelitian ini bertujuan untuk mengetahui efek asam sitrat, asam tartrat, dan interaksinya yang dominan dalam menentukan sifat fisik tablet *effervescent* vitamin C dan mendapatkan komposisi asam sitrat dan asam tartrat yang optimum.

Penelitian ini termasuk penelitian eksperimental murni menggunakan desain faktorial dengan dua faktor dan dua level. Pembuatan tablet *effervescent* dilakukan secara kempa langsung. Kategori respon yang diharapkan, yaitu kekerasan, kerapuhan, dan waktu larut.

Hasil penelitian menunjukkan bahwa asam sitrat dominan dalam menentukan kekerasan dan waktu larut tablet *effervescent*, sedangkan asam tartrat dominan dalam menentukan kerapuhan tablet *effervescent*. Dari *contour plot super imposed* diperoleh area optimum untuk kekerasan, kerapuhan, dan waktu larut. Area tersebut diprediksi sebagai formula optimum tablet e*ffervescent* pada level yang diteliti.

Kata kunci: asam sitrat, asam tartrat, tablet *effervescent*, desain faktorial

ABSTRACT

The research about "compositions optimization of citric acid – tartaric acid of vitamin C effervescent tablets: factorial design method application" has been done. The aim 0f the research were to observe the dominant effect among citric acid, tartaric acid, and the interaction on determining the effervescent tablets properties, and to obtain the optimum composition of formulation area.

This research was a pure experimental study based on factorial design with two factor and two level. The preparation tablet effervescent with direct compression. The respond category includes hardness, friability, and disintegration time of effervescent tablet

The result shown that ctric acid dominant in determining the hardness and disintegration time, wheares tartaric acid dominant in friability effervescent tablets. From the counter plot superimposed, there was found the optimum area for the hardness, friability, and disintegration time effervescent tablets. characteristic effervescent tablets. That area was supposed as the formula of the optimum citric acid and tartaric acid in the tested level.

Key word : citric acid, tartaric acid, effervescent tablet, factorial design