

## INTISARI

Sifat fisis dan stabilitas emulsi oral Air/Minyak (A/M) dipengaruhi oleh proses pencampuran yang meliputi lama dan suhu pencampuran. Lama pencampuran memberi pengaruh pada viskositas emulsi sehingga memungkinkan terjadinya perubahan sifat fisis. Suhu pencampuran memberikan energi kinetik pada droplet fase terdispersi sehingga mempermudah proses emulsifikasi. Penelitian ini bertujuan untuk mengetahui bagaimana efek proses pencampuran (lama dan suhu pencampuran) terhadap sifat fisis dan stabilitas emulsi oral A/M ekstrak etanol buah pare (*Momordica charantia* L.).

Penelitian ini merupakan rancangan yang bersifat eksperimental dengan menggunakan desain faktorial dengan dua faktor yaitu lama pencampuran-suhu pencampuran dan dua level yaitu level tinggi-level rendah. Sifat fisis (viskositas, ukuran droplet, indeks *creaming*) dan stabilitas emulsi (viskositas, ukuran droplet, indeks *creaming* secara periodik selama 1 bulan; dan pergeseran ukuran droplet setelah penyimpanan 1 bulan) diamati dalam proses pencampuran. Data dianalisis secara statistik menggunakan *Design Expert 7. 1.4* untuk mengetahui signifikansi ( $p < 0.05$ ) dari setiap faktor dan interaksinya dalam memberikan efek.

Hasil penelitian lama pencampuran, suhu pencampuran, dan interaksi keduanya tidak memberikan efek yang signifikan terhadap sifat fisis dan stabilitas emulsi oral A/M ekstrak etanol buah pare.

Kata kunci : lama pencampuran, suhu pencampuran, emulsi A/M, ekstrak etanol buah pare (*Momordica charantia* L.), dan desain faktorial.

**ABSTRACT**

Physical properties and stability of W/O oral emulsion is influenced by the mixing process that includes mixing time and mixing temperature. Mixing time influences the emulsion viscosity which changes the physical properties of emulsion. Mixing temperature gives kinetic energy of the dispersed phase droplets that can facilitates emulsification. This study aimed to find out how the effect of mixing process (mixing time and mixing temperature) on physical properties and stability of *Momordica charantia* L. fruit ethanolic extract W/O oral emulsion.

This study was an experimental research using a factorial design with two factor mixing time-mixing temperature and two level high level-low level. The physical properties (viscosity, droplet size, creaming index) and the stability of the emulsion (the profiles of viscosity, droplet size, and index of creaming for 1 month; and droplet size shift over one month storage) were observed for the mixing process. The data were analyzed statistically using Design Expert 7.1.4 for knowing the significance ( $p < 0,05$ ) of each factor and their interaction in giving effect.

The result of this study showed that the mixing time, mixing temperature, and their interaction did not provide significant effect on physical properties and stability of *Momordica charantia* L. fruit ethanolic extract W/O oral emulsion.

**Keywords** : mixing time, mixing temperature, W/O emulsion, *Momordica charantia* L. fruit ethanolic extract, and factorial design.