

ABSTRACT

Comparative Study of Stability of *O*-(3-chlorobenzoyl)salicylic acid and *O*-acetilsalicylic acid (acetosal) at pH 11

This research was done to compare the stability of *O*-(3-chlorobenzoyl)salicylic acid and *O*-acetilsalicylic acid. *O*-(3-chlorobenzoyl)salicylic acid has great potency to be developed furthermore, because it has an analgesic activity that similar with *O*-acetilsalicylic acid. The stability was determined by studying the degradation of these compounds by comparing their physicochemical parameters, which were reaction rate constant (k), half-life period ($t_{1/2}$), dan shelf life (t_{90}). The degradation of these compounds was done at various time in condition pH 11 at 80°C. The quantitative analysis was done by spectrophotometry UV method. It was obtain that in condition pH 11. *O*-(3-chlorobenzoyl)salicylic acid more stable than *O*-acetilsalicylic acid.

Keywords: *O*-(3-chlorobenzoyl)salicylic acid , *O*-acetilsalicylic acid
UV spectrophotometry, kinetics of degradation

