

- ANTIBIOTICS - PHARMACOKINETICS
- COLORIMETRIC ANALYSIS

SKRIPSI

YULIANTI KUSUMANINGRUM

**PERBANDINGAN KINETIKA PERURAIAN
N-(4-NITROBENZOIL) SEFALEKSIN DAN
SEFALEKSIN DENGAN METODE KOLORIMETRI**



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ABSTRACT

COMPARATIVE OF DEGRADATION KINETICS OF *N*-(4-NITROBENZOYL)CEPHALEXIN DAN CEPHALEXIN WITH COLORIMETRIC METHOD

This research was done to compare stability of cephalixin and its new derivate, *N*-(4-nitrobenzoyl)cephalexin. The stability determination can use degradation kinetics principle by measuring physical chemistry parameters such as reaction rate constant (k), half life ($t_{0,5}$), shelf life ($t_{0,9}$), and activation energy (E_a). Based on these parameters, the stability of *N*-(4-nitrobenzoyl)cephalexin can be determined and then compared with cephalixin as its lead compound. The stability was determined by studying degradation kinetics of these compounds at various temperatures and times. The active compound was analyzed by using colorimetric method with hydroxylamine reagent. The result showed that, only the cephalixin that can be determined with colorimetric method. So, it is suggested to find the most appropriate method which have high selectivity for *N*-(4-nitrobenzoyl)cephalexin.

Keyword : *N*-(4-nitrobenzoyl)cephalexin, cephalixin, degradation kinetics, colorimetric method, Spectrophotometer UV-Vis.