

**Study of Potency Andstability of Amoxicillin Dry Syrup and Dry Injection after
Reconstuted**

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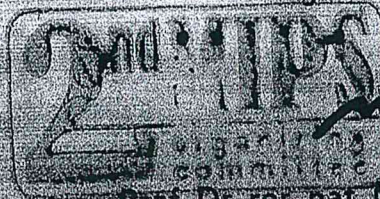
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DAAD

STUDY OF POTENCY AND STABILITY OF AMOXICILLIN DRY SYRUP AND DRY INJECTION AFTER RECONSTITUTED

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ABSTRACT

Amoxicillin dosage form also available in dry syrup and injectable dosage dry. This dosage forms should be reconstituted before used and should be used it right away, this suspension can not be stored for long time just for certain period time. In this study has been carried out observations on the storage time of the stocks in terms of stability and potency of amoxicillin dosage form that has been reconstituted at a temperature of 0 C for storage of dried injection and 40C for dry syrup. The result showed the amoxicillin injection dosage and syrup has been reconstituted no change both color and odor, and a decline in pH during 96 hours of storage. Amoxicillin content in dry injection and dry syrup decreased during storage levels were measured using HPLC. Observations also showed that the reduction potential (%) both injection and dry syrup after reconstituted against *Escherichia coli* after 96 hours of storage of 90.21% and 94.2%. respectively. While the decline in potency (%) and injectable dosage amoxicillin syrup after reconstituted against *Staphylococcus aureus* after 96 hours of storage, respectively, 80.69% and 92.49%. respectively. The results of the research that has been done showed that the influence of storage time and potential injection dosage is decreased more than amoxicillin syrup .

Key words : Amoxicillin, Dry Injection, Dry syrup, Reconstituted, *Escherichia coli*, *Staphylococcus aureus*

INTRODUCTION

Antibiotic is substance which is produced by fungus or bacteria, able to kill or to inhibit bacteria growing. (Tan dan Rahardja, 2002).

Amoxicillin is broad spectrum antibiotic kill negative and positive bacteria such as *Escherichia coli*, *Salmonella*, *Streptococcus pneumoniae*, *Bacillus subtilis*, *Staphylococcus aureus* (Mc Evoy, 2002).

Pharmaceutical dosage form of amoxicillin , one of them is dry syrup for oral .Dry syrup is a granule or powder and reconstituted before used with water to become a suspension. The reason why the dosage form is dry syrup, because antibiotic is unstable in water and can not be stored for long periode of time , its degraded and the doses become less for every milliliter (Ernest, 1996). The dry syrup is more stable for seven days at

room temperature, after reconstituted (Alviany, 2008).

Amoxicillin dry injection also is dry suspension of amoxicillin and reconstituted before use it. Dry suspension usually is granule sterile for unstable substance in water, and should give some information how to constitute in vial aseptically and what kind of solvent is used (Ansel, 1989).

Amoxicillin injection is Na amoxicillin Sodium sterile in water for injection with or without excipient (The Departement of Health, 2002). Na-amoxicillin can be stored just for 2 days at 0°C (Trissel, 1998).

Dry injection its suit for amoxicillin because their salt is hygroscopic and hydrolysis in water, so its stable in dry injection and put in vial with tight cover and protect from light (USP Convention, 2005).