

UNIVERSITI TEKNOLOGI MARA

**SOLUBILIZATION OF ACETAMINOPHEN BY
ANTIHISTAMINIC DRUG**

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ABSTRACT

The study on solubility yield information about structure and intermolecular forces of drugs. Using of the solubility characteristics in bioavailability, pharmacological action and solubility enhancement of various poorly soluble compounds. Hydrotropy is one of the solubility enhancement techniques which enhance solubility to many folds with use of hydrotrope like chlorpheniramine maleate to solubilize acetaminophen (paracetamol).

Keywords: Hydrotropy, Acetaminophen, Chlorpheniramine maleate, solubility.

CHAPTER 1

INTRODUCTION

1.1 Research Background

Advances in drug manufacturing, oral liquid solutions still remains a problem for the industrial pharmacist to solubilize poor water-soluble drugs in their formulation (R. K. Maheshwari & Rajagopalan, n.d.). There are some products in the market is not available to pediatric patients due to differences in many aspects with adult patients but there are many similarities need to be considered especially for drug delivery and drug formulations (Florence & Siepmann, 2009).

The essential method to administer the drugs in systemic circulation through oral dosage forms (Winfield & Richards, n.d.). Pediatric patients is preferred liquid rather than solid dosage form because the liquid is easier to swallow and easy to handle. Basically, solutions are defined as a homogeneous system which is a mixture of two or more components results in the formation of a single phase to uniformly distribute drugs in the preparation. Any drugs have to dissolve into solution first before it can be absorbed. Therefore, the therapeutic response of liquid preparation is faster than solid dosage formed. For oral dosage form, the solubility and bioavailability of drug molecules