UNIVERSITI TEKNOLOGI MARA

# AN ANALYTICAL METHOD FOR THE ANALYSIS OF PREDNISOLONE IN TABLET FORMULATION BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

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## ABSTRACT

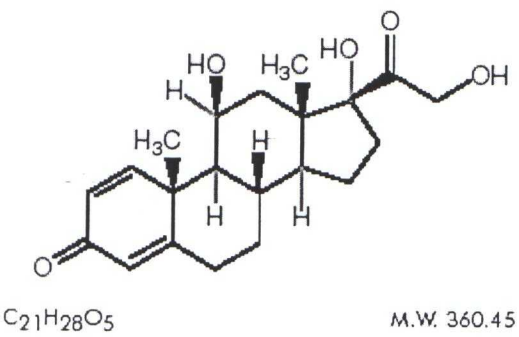
A high performance liquid chromatographic assay with ultraviolet (UV) absorbance at 254 nm was developed for the analysis of prednisolone in samples given. The developed technique was reproducible, selective, reliable and sensitive for the analysis of prednisolone. Samples and an external standard (prednisolone) given were eluted onto a column packed with reverse phase ODS silica gel by a mobile phase composed of distilled water-methanol (60:40, v/v). External standard as calibrators were prepared in concentrations ranging from 50 μg/ml to 250 μg/ml. The calibration curve obtained was linear with correlation factor of 0.99973. Samples were injected at a flow rate of 1.2 ml/min. The developed method was rapid and specific for the quantification of prednisolone drug at a run time of below 5 minutes.

# CHAPTER 1

# INTRODUCTION

## 1.1 Introduction

Prednisolone is a synthetic steroid drug with glucocorticoid activity (Gilman, A. G. *et al,* 1992). It has a cortisone-like action due to its chemical structure (Figure 1.1) containing similar rings as the naturally occurring glucocorticoids in the body, hydrocortisone (Figure 1.2) (B. P., 1998).




$C_{21}H_{28}O_5$ M.W. 360.45

Figure 1.1 Structure of prednisolone

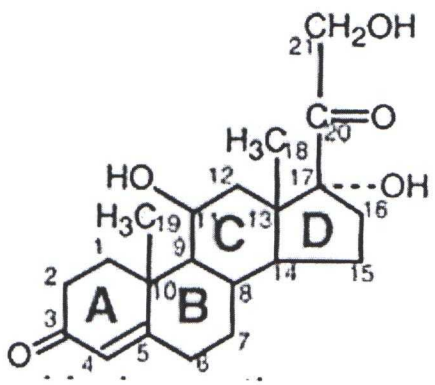



Figure 1.2 Structure of hydrocortisone