A STUDY ON INDOOR AND OUTDOOR AIR PARTICULATE MATTER (PM_{10}) CONCENTRATION AND COMPOSITION IN THE CLASSROOM AT UiTM SHAH ALAM CAMPUS

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TABLE OF CONTENTS

ABSTRACT

A STUDY ON INDOOR AND OUTDOOR AIR PARTICULATE MATTER (PM10) CONCENTRATION AND COMPOSITION IN THE CLASSROOM

A study was conducted at inside and outside classroom at room B404 at Faculty of Applied Science, Universiti Teknologi Mara (UiTM) for indoor and outdoor air Quality. The indicator of air pollutants were particulate matter (PM_{10}). The instruments used for this study are Air mini Volume Sampler and ICP-OES. The monitoring was conducted during semester on for weekdays and weekends. From the study carried out had shown that the level of air pollutant (PM_{10}) at outside classroom at weekdays was generally high, exceeding the Malaysian Ambient Air Guidelines, (1995). From the measurement, concentration of PM_{10} exceeds the limit because of the vehicles and the construction activities. The highest value of PM_{10} measurement reaches almost 157$\mu g/m^3$, which is obtained at outside classroom at weekdays. Four elements were determined that are, lead, zinc, copper and calcium. The elements had highest concentration was calcium and the element had lowest concentration was lead at all 4 separate days.

CHAPTER 1

INTRODUCTION

1.1 Background

Air Pollution is addition of harmful substances to the atmosphere resulting in damage to the environment, human health, and quality of life. One of many forms of pollution, air pollution occurs inside homes, schools, and offices; in cities; across continents; and even globally. Air pollution makes people sick and it causes breathing problems and promotes cancer and it harms plants, animals, and the ecosystems in which they live. Some air pollutants return to Earth in the form of acid rain and snow, which corrode statues and buildings, damage crops and forests, and make lakes and streams unsuitable for fish and other plant and animal life.

Pollution is changing Earth's atmosphere so that it lets in more harmful radiation from the Sun. At the same time, our polluted atmosphere is becoming a better insulator, preventing heat from escaping back into space and leading to a rise in global average temperatures. Scientists predict that the temperature increase,