**Title** Study on Particulate Matter (PM10) in Atmosphere, Rajabhat

Maha Sarakham University.

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**Abstarct**

The purpose of this study was to investigate particulate matter (PM10)

in Atmosphere of Rajabhat Maha Sarakham University, which seven monitoring stations were selected in traffic jammed area. These seven stations are as follows: station 1) the entrance gate of campus (site of 72 Anniversary Building gate (Building 15)),

station 2) the traffic circle in front of the Computer and Language Building (at the side of Building 15), station 3) the traffic circle in front of the Faculty of Science and Technology (at the side of Building 10), station 4) the entrance gate at Faculty of Law (Building 33), station 5) in front of Childcare Center’s Rajabhat Maha Sarakham Demonstration School, station 6) between the front of Community Public Health Program Building and Faculty of Engineering Building, and station 7) in front

of Building 4. The measurement was done during the months of February to March 2016 with High Volume Air Sampler (Model 3000 Ecotech) which measured continuously for 24-hour of two days; one working day and one holiday. In addition, there was also a traffic volume study by manual counts of vehicle traffic through the monitoring stations of PM10 during peak times of the day.

The counting of vehicle is divided into the morning period at 7:30 to 8:30, and the evening period at 15:30 to 16:30. The vehicles were divided into four categories, including two-wheel s vehicles, three-wheels vehicles, four-wheels vehicles, and vehicles with more than four-wheels.

 The results revealed that station 1) was maximum amount of PM10 152.00 µg/m3 followed by the station 6) of 127.25 µg/m3, station 2) of 115.90 µg/m3,

station 5) of 81.95 µg/m3, station 3) of 77.10 µg/m3, station 4) of 76.30 µg/m3, and the lowest at station 7) of 7 35.05 µg/m3; respectively. PM10 of station 1) and station 6)

was higher than the standard air quality of Thailand that was defined to 120 µg/m3.

For the volume of traffic, it was found that the station 3) has highest vehicle number

of 3,338 vehicles per hour, followed by station 4) 2198 vehicles per hour, station 7) 2,187 vehicles per hour, station 2) 1,698 vehicles per hour, station 1) 1,383 vehicles per hour, station 5) 1,202 vehicles per hour, and station 6) 6,564 vehicles per hour; respectively.