

# **Aerosol Optical Thickness Derived From Atmospheric Transmittance Using Spectroradiometer Measurements**

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**1 The objective of this study was to test the feasibility of hand held spectroradiometer measurements for the retrieval AOT values. Twenty-six stations were chosen randomly around Penang Island and the atmospheric transmittance measurements were collected using a handheld spectroradiometer. The corresponding PM10 concentrations were measured using a portable DustTrak Aerosol Monitor 8520 simultaneously with the measurements of the transmittance data. The AOT values were calculated using the Beer-Lambert-Bouguer law. Linear relationship was found between AOT and PM10 values in this study. Finally, a PM10 map was created using Kriging interpolation technique. The result of the study showed the potential of a spectroradiometer data for the retrieval of AOT and PM10 to provide the air pollution information.**