UNIVERSITI TEKNOLOGI MARA

A STUDY IN MONITORING AIR QUALITY IN KLANG

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ABSTRACT

Over the last two decades, the issue of air quality has become a significant concern in Malaysia. Values of API that exceed the concentration of 100 are considered as unhealthy. Klang is one of Malaysia's most heavily populated, urbanised, and industrialised areas. Therefore, this study was conducted to evaluate the environmental performance in Klang using statistical process control and validate the capability of control limit based on process capability index approach. Moreover, this study also determining whether there is a significance difference in API between the period of Movement Control Order (MCO) and non-Movement Control Order (non-MCO). The hourly data was obtained from Department of Environment (DOE) in this study. Based on I-MR chart, it was found that points beyond the upper and lower control limits indicated that air quality in Klang is stable. Furthermore, the performance of air quality in Klang is good since the Cp value is 1.49. According to Wilcoxon Signed-Ranks Test (p-value=0.008), it can be concluded that there is a significant difference in API during non-MCO and MCO in Klang. This study will assist relevant authorities in resolving the air pollution problem by providing information on the current status of air quality. It is hoped that this study benefits the community to be aware of the air quality especially those who stay in Klang. The API can be a guideline for the public to plan their daily activities. Moreover, this study reflected the strong interest or concern about the issue of poor air quality.

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