

Respirable Dust Monitoring Among Housekeepers in UiTM Hotel

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Structured Abstract

Background: Housekeepers in hotels are at risk of exposure to respirable dust, which can lead to various health issues. This study aimed to determine the concentration of respirable dust among housekeepers at UiTM Hotel, assess their potential health risks, and compare these concentrations with regulatory standards to ensure workplace safety and health compliance. Housekeepers perform tasks such as dusting, vacuuming, sweeping, mopping, and bathroom cleaning, all of which can generate respirable dust. This dust can lead to various respiratory health issues, such as chronic bronchitis, asthma, and other lung diseases. This study provides insights into the specific risks and challenges faced by housekeepers in hotels.

Methods: The study used a systematic stratified random sampling method to ensure a comprehensive representation of housekeepers' diverse tasks and conditions. Sampling monitoring for respirable dust was conducted using a method outlined in The NIOSH Manual of Analytical Methods (NMAM) 4th Edition. The focus of this assessment is on particulates not otherwise regulated, and the chosen method is Method 0600 as specified in NMAM. This method primarily involves a personal sampling pump equipped with a cyclone, typically a 10-mm nylon cyclone were used during work shifts to collect dust samples. Background information and respiratory complaints were gathered through questionnaires. Data analysis was performed using SPSS software to determine correlations between dust concentrations and health effects.

Results: The study found that the average respirable dust concentration was 0.61 mg/m³ in UiTM Hotel Shah Alam and 0.49 mg/m³ in UiTM Hotel Puncak Alam. Although these values were within OSHA and ACGIH safety standards, they highlighted significant health risks from prolonged exposure. The survey revealed that some housekeepers experienced respiratory issues. Statistical analysis showed a correlation between dust concentrations and potential health effects among housekeepers.

Conclusion: In conclusion, the findings of this studies respirable dust levels among housekeepers at UiTM Hotel did not exceed OSHA and ACGIH standards. However, prolonged exposure still posed health risks.

Keywords: Respirable dust, Health risk, OSHA standards, ACGIH standards

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