

UNIVERSITI TEKNOLOGI MARA

**MOLD GROWTH AT UITM PUNCAK ALAM HEALTH
SCIENCES LABORATORIES: IDENTIFYING INDOOR
ENVIRONMENTAL FACTORS**

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**Project paper submitted in partial fulfillment of the requirements
for the degree of
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Declaration by Candidate

Project entitled "Mold Growth at UiTM Puncak Alam Health Sciences Laboratories: Identifying Indoor Environmental Factors" is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Mr. Abdul Mujid Bin Abdullah as Project Supervisor and Ir. Nimi Binti Ahmad as Co-supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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Abstract

Mold Growth At Uitm Puncak Alam Health Sciences Laboratories: Identifying Indoor Environmental Factors

Nur Alia Binti Jony

Indoor mold growth is always associated with room's temperature, relative humidity, and the ventilation rate of the room. Most of the interior surfaces in the laboratories of Faculty of Health Sciences, UiTM Puncak Alam have mold problems. The exposure to mold growth in building may cause adverse health effects to human such as asthma symptoms, coughing, and upper respiratory track symptoms. The aim of this study was to identify the indoor environmental factors that may contribute to the presence of visible molds growth in the laboratories. The indoor temperature and relative humidity were measured in the morning and afternoon using Heat Stress Meter. Visual observation was conducted to investigate the indoor environmental factors that may contribute to the growth of molds. The mold samples were taken according to swabbing technique. Chi-square test revealed that there was no significant association between the presence of visible molds with the room's temperature ($p>0.05$). However, there was a significant relationship between the presence of visible molds and the relative humidity in the rooms ($p<0.05$). The relative humidity in the laboratories that have mold problem were higher as compared to the laboratories without mold. These laboratories showed signs of dampness in the room, such as the water stains were obviously appeared on the ceiling of the rooms. The water leakage on the ceiling was triggered the growth of molds on the internal surface of the buildings. The genus of molds found was *Aspergillus/Penicillium* species. Some of the species under these genera were categorized as pathogenic which might cause adverse health effects to humans. Further studies are needed to identify the species of molds in order to confirm the pathogenicity for each species.

Keywords: mold, relative humidity, room's temperature, *Aspergillus / Penicillium*.