

ABSTRACT**RELATIONSHIP OF URINE TRANS, TRANS-MUCONIC ACID (tt-MA) LEVELS AND HAEMATOLOGICAL PROFILE OF THE PERTAMINA MOR V GAS STATIONS WORKERS**

Benzene is a dangerous chemical compounds that can cause haematological effects. Gasoline contains approximately 5% carcinogens benze. Gas station employees, particularly fueling operators are working population that have a high risk of benzene exposure. Within the continuous exposure. The purpose aim of this study is to analyze the relationship the levels of trans, trans-Muconic Acid (tt-MA) in urine with haematological profile of the Pertamina MOR V gas station workers.

The study was designed as an observational study and conducted by cross sectional method with 33 samples (12 samples administrative workers and 21 samples in fueling operator). The dependent variable in this study was haematological profile (haemoglobin, hematocrit, eritrosit, MCV, MCH, MCHC, platelets, leukocytes, eosinophils, and basophils), while the independent variables were characteristics of workers (age, sex, body mass index, smoking habits), and occupational factors (working period, the amount of fuel fill, the duration of filling the fuel).

The research showed that average concentration of benzene in the air is 0,58 ppm. The research found that there are significant differences in the level of tt-MA in urine ($p=0,001$) and basophils (0,024) among fueling operator and administrative employees. The result of Spearman analysis showed a significant correlation the amount of fuel fill and the duration of filling the fuel with the level of tt-MA in urine ($p=0,000$). The result of Pearson Correlation analysis showed a significant correlation the tt-MA in urine with basophils ($p=0,006$).

From this research can be concluded, that more fuel is fill and the longer the duration of filling the fuel by respondent, the higher levels of tt-MA in urine and levels of tt-MA representing the risk factor haematology profile rate of basophil. Therefore, works should use PPE and that medical surveillance conducted continuously every year.

Keywords: urine trans, trans-Muconic Acid (tt-MA) levels, haematological profile, gas station workers