

Assessment on physiological effects of heat stress among palm oil mill in tropical climate condition

ABSTRACT

Background: Palm oil industry contributes majority revenue for manufacturing industry in Malaysia. The process in palm oil mill involves lot of steam consumption and high pressure to maintain good quality of palm oil. In palm oil mill, the workers handle machine directly and consequently exposed to high temperature due to steam which contribute to heat stress. A preliminary study aimed to determine the prevalence of heat stress among palm oil mill workers that involved measurement of heat exposure in working environment and physiological measurement. **Objective:** This paper is briefly determine the assessment on physiological effects of heat stress among palm oil mill workers in tropical climate condition. **Results:** The result indicates most of the work unit in palm oil mill exceeded the TLV permitted. However, the physiological of the workers shows the result within considerable values. **Conclusion:** The workers are exposed to extreme heat, but the evidence indicate that the physiological parameters is not affected drastically indicating adaptive and acclimatize at the level of heat. Therefore, there are need new heat stress index to predicting an accurate heat stress index for acclimatize workers in tropical climate condition.

Keyword: Heat stress; Physiological effects; Palm oil mill; Tropical climate