

Work Environment in Selected Tannery Industries in Bulacan

Research Paper No. 1999-10



Department of Labor and Employment
Occupational Safety and Health Center
North Avenue corner Agham Road,
Diliman, Quezon City, Philippines



Management System
ISO 9001:2015



www.tuv.com
ID: 9105081680

Work Environment in Selected Tannery Industries in Bulacan

Abstract

The tannery industry employs an estimated 8,000 workers and involves a series of processes utilizing various chemicals such as sulfuric and formic acids, ammonia, and chromium. The latter, according to the International Agency for Research on Cancer and the US Toxicology Program, is recognized as a pulmonary carcinogen.

This study aimed at determining the working environment conditions in selected leather processing industry in Meycauayan, Bulacan, seeking to identify the workers' level of exposure to ammonia, chromium, sulfuric and formic acid; to assess; and evaluate the working environment and to describe the work practice of tannery workers.

Fifty-one (51) respondents selected from five tanneries were interviewed using a structured questionnaire. To closely approximate the concentration of chemicals to which they were exposed, personal sampling was conducted. This involved the positioning of a measuring device as close as possible to the workers' breathing zone. Aside from personal sampling, the contaminant concentration in the workroom was measured. The general ventilation of the workroom was measured to assess the thermal comfort experienced by the respondents while working.

Work environment assessments showed the exposure of workers to airborne concentration of chromium, formic and sulfuric acid and ammonia were within their corresponding threshold limit values. However, it was observed that these tanneries had rather poor housekeeping practices. Storage and disposal of chemicals were not properly managed. Workers were not given appropriate

protective device for their use. The workplaces were generally damp with pungent odor emitted from within.

To assess the health implications associated with the hazards observed in these workplaces, it is recommended that further studies be carried out on the health effects of the chemicals measured in this study. Future research could provide a relation between the length of exposure of workers to the same chemicals measured in this study and the health condition of the respondents