

of exposure to work environment temperature and the concentration of uric acid in urine of the workers who work in the furnace section of PT. INCO, Soroako. Method This research uses the method of analytical survey with a cross sectional approaching. Result It can be seen that there are 66 samples that have an abnormal concentration of uric acid in their bodies, out of 105 respondents. The temperature of work environment in the furnace section of PT. INCO is 29,9° C, which has exceeded the critical value of 29,4° C. The exposure duration which should not exceed 4 hours a day, in point of fact, from 105 respondents, there are 35 (33,3%) of them whose exposure durations exceed 4 hours a day. Conclusion There is a relationship between the temperature of work environment and the concentration of uric acid of workers' urine ($p = 0,001$) and there is also a relationship between the exposure duration to work environment temperature and the uric acid concentration in workers' urine ($p=0,021$). The researchers hope that PT. INCO, Tbk Soroako will make an effort to take control not only of the environment but also of its workers.

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The Difference between Types of Occupational Injury and Turnover among Nurses in a Medical Center: A 6-Years Follow Up

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Background & Purpose: Occupational injury is an uncomfortable experience and may increase intension of nurses to leave their jobs. Therefore, the aim of this study was to compare the turnover rate within types of occupational injuries.

Methods: A retrospective review of all occupational injury reports from full-time nurses from January 2003 to December 2008 at a medical center in north Taiwan. Kaplan–Meier survival functions were used to estimate cumulated turnover rate curves within types of occupational injury, and compare the difference via log rank test.

Results: A total of 225 accident cases were reported, sharp injury contributed to 73.7%, work-related falling and traffic accident during on and off duty were 26.3%. Almost half of the nurses were between 26-35 years (44.9%), majority was female (99.1%), clinical working length was 5.52 years. Nurses who had been suffered occupational injury had higher turnover rate than those had not been injured in 2003(38.6% vs. 7.9%, $p = .000$), 2004(28.2% vs. 13.9%, $p = .014$) and 2006(25.8% vs. 12.36%, $p = .028$). Kaplan Meier curve showed that sharp injuries exhibited higher cumulated turnover rate than another injuries (36.6% vs. 27.2%), but the Log rank test did not reveal significant difference ($p = 0.454$).

Conclusions: The turnover rate of nurses with occupational injuries was higher than others; therefore, hospital managers should pay more attention to the nurse

who has been injured and develop intervention to reduce the occupational hazard.

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Urinary Nonylphenol Level Using HCL Hydrolyzing and Application

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One of proved endocrine disrupting chemicals (EDCs), nonylphenol (NP) is a widely used non-ion surfactant that may cause infertility and reproductive defects. Most researches used enzyme hydrolyzing method, a complicated procedure, to determine NP in urine. We developed the simple HCL hydrolyzing procedure for urine pretreatment and measured the free NP using high sensitive HPLC-fluorescence detector. Urine samples provided by hair salon workers and college students were analyzed and compared. The results showed that the HCL hydrolyzing pretreatment revealed not only a better performance than enzyme method but also more convenient. The analytic method showed a correlation coefficient value of greater than 0.999 for the standard calibration curve, and an average spike recovery of about 90% with the coefficient of variation (CV) of < 7%. Urine samples provided by the hair designers, hair assistants and students at hair salons were analyzed and compared. The gravity adjusted average NP concentration among all urine samples was 7.4 ng/mL. The average in hair assistants was 2 times higher than those in designers and students. Our study found that hair salon workers are at higher risk of NP exposure.

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Comparing Asbestos Contents in Building Materials between Samples Collected in Taiwan and from Thailand

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Asbestos has the characteristics of acidity-alkalinity and heat resistance with high tensile strength. This material can be used to manufacture asbestos panels, pipes, asbestos cement and fiber, and cement board. The workers handling asbestos may expose to the fiber at the risk of health hazards. This study compared asbestos contents in building materials between samples collected in Taiwan and from Thailand. We used XRD to analyze the types and contents of asbestos. Samples were pre-treated using formic acid and dispersed with the ultrasonic cleaner for 10 minutes, then stayed for 12 minutes in the room temperature. Results showed that the asbestos tiles collected in Taiwan consisted of 2.3~5.4% Chrysotile and 0~0.87% Amosite. The partition materials collected at a school contained 0.31% of Amosite, and