Evaluasi Tingkat Risiko Kesehatan Pada Metode Pengujian Emas Di Laboratorium Mineral XYZ

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Abstrak

Pengujian emas di laboratorium mineral menggunakan bahan-bahan kimia berbahaya bagi kesehatan pekerja baik metode Fire Assay, metode aqua regia dan metode leaching sianida. Sehingga perlu diketahui risk rating dari bahan kimia dan metode pengujian yang dilakukan agar dapat ditentukan langkah-langkah pencegahan dari potensi terpajan dengan bahan kimia dan bahkan terjadinya penyakit akibat kerja. Di Laboratorium Mineral XYZ sudah menjalankan penilaian risiko secara general melalui formulir HIRADC namun belum dilakukan penilaian secara komprehensif dengan metode yang tepat terhadap risiko kesehatan pekerja. Metode CHRA DOSH Malaysia (2018) sangat tepat dipilih dalam melakukan penilian bahaya bahan kimia melalui rute inhalasi dan dermal. risiko kesehatan pengujian emas dilaboratorium Mineral XYZ   didapatkan bahwa risk rating pajanan inhalasi secara kualitatif dalam pengujian emas dengan metode aqua regia lebih rendah dibandingkan dengan pengujian emas dengan metode fire assay dan metode leaching sianida. metode fire assay memiliki risk rating = 25 (High Risk) metode digestion aqua regia = 9 (Moderate Risk), dan metode leaching sianida = 15 (High Risk). Hal ini sejalan dengan penilaian hazard   setiap bahan kimia yang digunakan pada pengujian emas dengan metode fire assay, metode aqua regia digestion dan metode leaching sianida yang paling tinggi nilai Hazard Rating (HR) pengujian emas dengan metode metode fire assay dengan nilai 5. Sedangkan penilaian risk rating pajanan dermal di dapatkan nilai 3= H2 (high Risk) terhadap ketiga metode pengujian emas tersebut. Pengendalian bahaya dan risiko kesehatan pengujian emas di Laboratorium mineral XYZ berjalan cukup baik, namun untuk pengujian emas dengan metode aqua regia digestion dan metode leaching sianida diharapkan dapat menjadi prioritas dalam pengendaliannya

<hr />Gold testing in mineral laboratories uses chemicals that are hazardous to workers' health, both the Fire Assay method, the aqua regia method and the cyanide leaching method. So it is necessary to know the risk rating of the chemicals and the testing methods used so that preventive measures can be determined from the potential for exposure to chemicals and even occupational diseases. In the XYZ Mineral Laboratory, a general risk assessment has been carried out through the HIRADC form, but a comprehensive assessment has not been carried out with the right method for worker health risks. The CHRA DOSH Malaysia (2018) method is very appropriate to be chosen in assessing the hazards of chemicals through inhalation and dermal routes. The health risks of gold testing in the XYZ Mineral Laboratory found that the qualitative inhalation exposure risk rating in gold testing with the aqua regia method was lower than gold testing with the fire assay method and the cyanide leaching method. The fire assay method has a risk rating = 25 (High Risk) the aqua regia digestion method = 9 (Moderate Risk), and the cyanide leaching method = 15 (High Risk). This is in line with the hazard assessment of each chemical used in gold testing with the fire assay method, the aqua regia digestion method and the cyanide leaching method which has the highest Hazard Rating (HR) value for gold testing with the fire assay method with a value of 5. While the risk rating assessment of dermal exposure obtained a value of 3 = H2 (high Risk) for the three gold testing methods.

Control of hazards and health risks of gold testing at the XYZ Mineral Laboratory is running quite well, but for gold testing with the aqua regia digestion method and the cyanide leaching method, it is expected to be a priority in its control