

## INTISARI

**Latar belakang.** Batik memiliki beberapa proses dalam pembuatannya, salah satunya adalah proses pewarnaan. Proses pewarnaan dapat menggunakan zat pewarna tekstil yang mengandung zat kimia berbahaya, seperti timbal. Timbal yang dapat masuk ke dalam tubuh akan dieksresikan melalui urin. Pemeriksaan kadar timbal dalam tubuh dapat diukur dengan sampel urin. Paparan timbal berefek toksik bagi tubuh manusia, salah satunya pada proses pembentukan hemoglobin.

**Tujuan penelitian.** Mengetahui hubungan kadar timbal urin terhadap kadar hemoglobin pada pekerja pewarna batik Kecamatan Lendah, Kulon Progo.

**Metode Penelitian.** Penelitian menggunakan metode *cross sectional* dengan data sekunder. Penelitian melibatkan pekerja batik di Kecamatan Lendah, Kulon Progo berusia 18-75 tahun yang terdata lengkap. Subjek penelitian dikelompokkan berdasarkan temuan kadar timbal urin menjadi kelompok terdeteksi timbal urin dan kelompok tidak terdeteksi timbal urin. Hubungan kadar kadar timbal urin dan kadar hemoglobin dianalisis dengan uji *t test independent*.

**Hasil Penelitian.** Dari 15 data pekerja batik berusia 18-75 tahun yang terdata lengkap, didapatkan nilai rata - rata hemoglobin pada kelompok terdeteksi timbal urin sebesar  $15,333 \pm 0,7174$  gr/dL sedangkan pada kelompok tidak terdeteksi timbal urin didapatkan  $15,322 \pm 1,7477$  gr/dL. Tidak ditemukan adanya perbedaan median kadar hemoglobin pada kelompok terdeteksi timbal urin dan kelompok tidak terdeteksi timbal urin ( $p=0,987$ ).

**Kesimpulan.** Tidak ditemukan hubungan kadar hemoglobin yang bermakna dengan terdeteksinya timbal pada urin pekerja batik Kecamatan Lendah, Kulon Progo.

**Kata kunci :** timbal, urin, hemoglobin, batik

## ABSTRACT

**Background.** Indonesia is the country of batik craftsmen. Batik has several processes in its production, one of them is a colouring process. The process may use a colouring substance that contains dangerous chemical substances, such as lead. Lead that enters the body will be re-excreted. Most lead excretion goes out through urine; thus body lead level checks can be measured with urine samples. Lead exposure has toxic effects for the body, one of them affects hemoglobin formation process.

**Research objective.** To know the relation of urine lead levels to hemoglobin levels on batik colorist workers in Kecamatan Ledah, Kulon Progo.

**Research method.** This was a cross sectional study using secondary data. The study involved batik workers in Ledah District, Kulon Progo aged 18-75 years who were fully recorded. Urinary lead levels were grouped into groups of detected urine lead and undetected urine lead. The relation between urinary lead levels and hemoglobin levels was tested with t test independent.

**Research Result.** From 15 data on batik workers aged 18-75 years who were completely recorded, it was found that the average value of urine lead detected was  $15,333 \pm 0,7174$  gr/dL. Meanwhile, in the urine undetected group, the average was  $15,322 \pm 1,7477$  gr/dL. There was no difference in median hemoglobin levels in the group with urine lead detected and the group not detecting urine lead ( $p= 0,987$ ).

**Conclusion.** There was no significant relation between hemoglobin levels and detected lead in batik workers urine in Kecamatan Ledah, Kulon Progo.

Key words : lead, urine, hemoglobin, batik