



Determination of Chromium (VI) Content in Leather Footwear in Albania

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Abstract: People can be exposed to chromium from leather product due to everyday contact with them. Chromium (VI) can cause healthy problem mostly to lungs and nose because of its toxicity. It has been identified as causing contact dermatitis. Hexavalent chromium is widely used in leather processes such as plating, tanning, pigment production, etc. Therefore is important to determinate the content of chromium VI valent in leather. If it is higher than the limit 3 ppm (3 mg/kg) (set by EU regulations) may pose a risk for human health. The objective of this paper was determining the content and potential release of chromium (VI) in leather footwear and other product. The determination of chromium (VI) in leather was performed based in ISO 17075:2007. Random sampling was done. Soluble chromium (VI) is leached from the sample in phosphate buffer at pH 7.5 to 8.0. The chromium (VI) in solution oxidizes 1.5-diphenylcarbazide to 1.5-diphenylcarbazone to give a red violet complex with chromium, which can be quantified photometrically at 540 nm. The result obtained from the describe method are strictly dependent on the extraction conditions (extraction solution, pH value, etc).

Key words: *leather, chromium (VI), spectrophotometry, toxic, tanning.*

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