

## **P101. INVESTIGATION OF HEAVY METALS IN SOME LIPSTICK PRODUCTS IN TURKEY**

Kenan Can TOK, Onur ERDEM, Eyüp ÇIRAK, Serdar ÇETINKAYA,  
Cemal AKAY, Zeliha KAYAALTI

Department of Forensic Toxicology, Institute of Forensic Sciences, Ankara University, Ankara, Turkey.  
Department of Pharmaceutical Toxicology, Gulhane Military Medical Academy, Ankara, Turkey.

There are many kinds of cosmetics are being used for many years. Cosmetics which applied to the skin surface can pass into the systemic circulation depending on the components inside and which may cause systemic exposure. Thus, the possible toxic effects associated with the use of these products are considered to be decisive of components of cosmetics. The most important of these components are toxic heavy metals which originated from production as inevitable impurities and/or contaminations. The most important heavy metals for cosmetics are lead (Pb), cobalt (Co), chromium (Cr), nickel (Ni), cadmium (Cd), antimony (Sb) and arsenic (As). The aim of this study we carried out investigation of 35 foundation sample which obtained from 11 different brands. In our study, levels of Pb, Co, Cr, Ni, Cd, Sb and As was measured using the method of graphite furnace atomic absorption spectroscopy (GFAAS). Our results show that levels of As, Cd, Co, Pb and Sb of samples are well below limits which set out in current regulations and highlighted suggestions in the literature. However, the amount of Cr in 34 samples was found to be above the limit (1 ppm) which highlighted in the literature in view of allergic reactions. Despite the fact that 14 samples are determined that exceed the recommended limit values of Ni, samples are well below the legal limits. As a result, it can be stated that examined lipsticks are safe to use in terms of heavy metals except for Cr. However, it would be useful to repeat similar studies with specific intervals for the safe use of these products.

\* [kcantok@gmail.com](mailto:kcantok@gmail.com)