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TATTOO INKS, CHEMICAL ANALYSIS AND PIGMENTS RELATIVE TO REGULATORY REQUIREMENTS

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Aim: The protection of the health of the consumer must be the goal of all analytics, laws or recommendations for tattoo and permanent make-up (PMU) inks.

Method: Chemical Analysis.

Results / Discussion: Achieving this goal requires a detailed understanding of the analytical tests to be performed as well as of the use and most importantly frequency of use of the products, including the amount of ink in the skin. This amount has been determined by CTL® and is low even for a large size tattoo. The focus of analytical tests must be on consumer protection, which is not always the case and evident in several Rapex alerts from 2014 where due to unsuitable analytical methods several products were banned although there was no evident health risk for the consumer.

The Council of Europe Resolution, ResAP(2008)1 lacks detail in several parts. Most important are the missing analytical methods for the denoted limits. If limits are set without being linked to analytical methods they are meaningless. Results are highly dependent on the methods used. Furthermore, the reasoning for the set limits is unclear. In some parts they are similar to limits for food, cosmetics or drinking water, i.e. for products consumed or used on a daily basis.

However, ResAP(2008)1 does not take into consideration that a tattoo is often done only once in a lifetime, that pigments and metals are mainly insoluble and require appropriate analysis and that contaminant levels in large tattoos are lower than in an apple.

Conclusion: More detailed work required in all fields.