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MICROBIOLOGICAL QUALITY AND PRODUCT LABELLING OF TATTOO INKS

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Aim: The purpose of the study was to examine the microbial product safety of unopened and opened tattoo ink in bottles and instruments (needles, spikes and grips). Packaging and labeling were also evaluated.

Methods: Physical inspection and microbiological analysis for bacteria and fungi were performed. Non-selective cultural media were used and incubation at 30°C. Identification of the bacterial species was carried out with the Vitek System.

Results: Only three of 34 inks were not contaminated. The 86% of the unopened ink bottles were contaminated. Different bacterial species were detected and the concentration range (1 ÷ >1000 CFU/ml) was very wide. Moulds were detected in much lower concentrations than bacteria. Some of the isolated bacteria were opportunistic pathogens and other species had a strictly environmental origin. All the instruments, labeled as "Sterilized" were not contaminated. On the label, all the products claimed sterility, had the brand name, the content and the expiry date. On nine bottles, the Period after Opening (PaO) was also reported. Each ink had its own Safety Data Sheet.

Conclusions: The European Council resolutions on tattoo ink introduce sterility and preservation of inks to protect customers. Nevertheless, the condition of sterility seems to be very difficult to maintain also in the unopened sterilized ink bottles. This can represent an additional risk for customers.