

Safety of tattoo inks

Ralf Michel

TIME – Tattoo Ink Manufacturer of Europe



overview

- Level of safety today
- Main chemical problems
- difficulties in ink production and safety assessment
- Actions to increase safety of tattoo inks
- Conclusion

Level of safety today

- RAPEX alerts

Year	Microbiological US	Chemical US	Microbiological EU	Chemical EU
2007	21	5	1	3
2008	1			
2009	21			
2010	2	7		3
2011		20		1
2012		31		5

- Microbiological problems can be considered as solved
- Chemical problems are not solved and mostly connected with American inks

Main chemical problems

- Carcinogenic aromatic amines
- Polycyclic aromatic hydrocarbon (PAH)
- Nitrosamines
- Heavy metals (Ni)
- preservatives

Difficulties in ink production

- Availability of pure pigments
- Availability of toxicological studies
- No common regulation
- No GMP guideline
- Missing valid tests replacing animal testing
- No guidelines for safety assessments
- Negative list of pigments based on cosmetics
- Free circulation of toxic inks

Actions to increase safety of inks

- Immediate:
 - effective marked control by authorities
- Mid term:
 - common European regulation
 - pigment positive list with purity definition
 - GMP guidelines
 - guidelines for safety assessment
- Long term:
 - scientific studies
 - valid standard tests for safety assessment

Thank you for your attention