



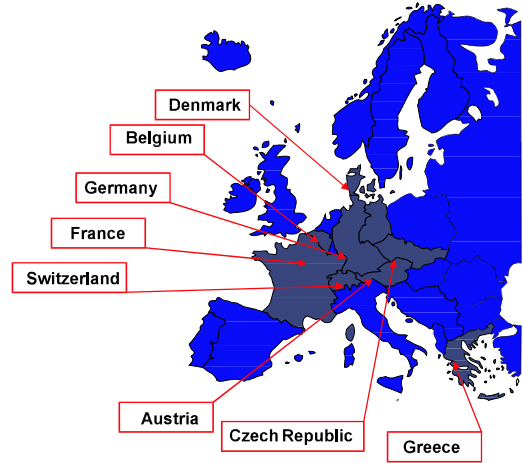
MutaTex:

Identification and substitution of mutagenic dyes in the European textile industry

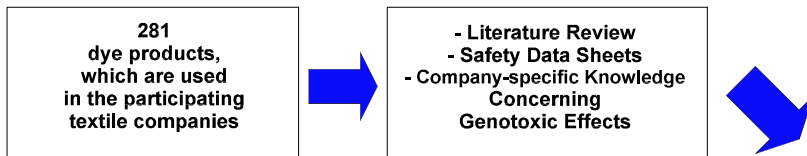
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Introduction

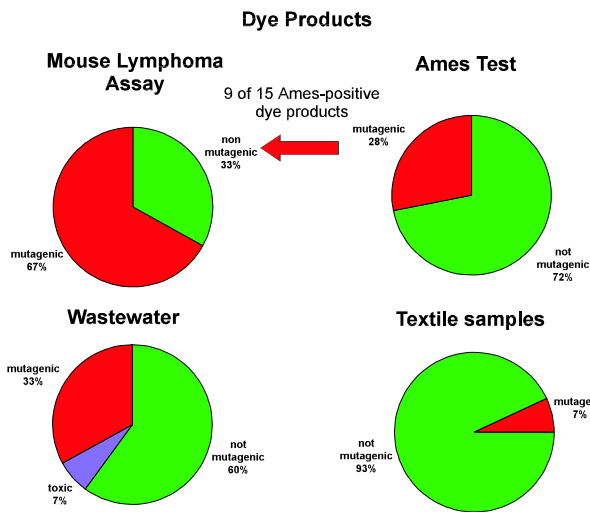
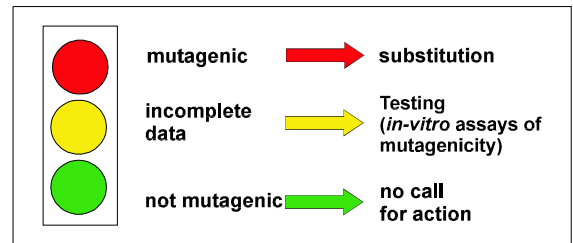
In the European research project "Identification and Substitution of Mutagenic Dyes in Textile Finishing (QLK4-CT-2000-70158)" textile dye products were examined for available (published and unpublished) genotoxicity data. Mutagenicity tests (Bacterial reverse mutation assay [Ames Test] and mouse lymphoma assay [MLA]) were performed and mutagenic products were substituted. Nine textile companies from 8 European countries and 4 research institutes participated in this project.



Methods



Results



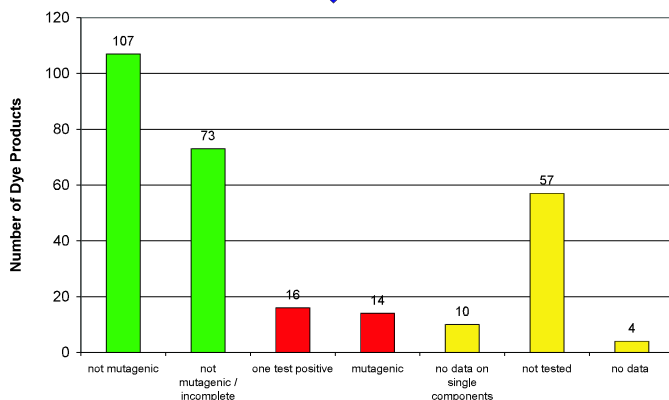
53 dye products were tested in the Ames Test with *Salmonella typhimurium* (TA98 und TA100)

9 Ames-positive dye products were tested in the mouse lymphoma assay (MLA)

More than 100 textile and wastewater samples were tested in the Ames Spot Test and in the Ames Test with *Salmonella typhimurium* (TA98 und TA100)

With two wastewater samples it was possible to identify the textile dyes in the production process responsible for the mutagenic effects observed.

With all participating companies several mutagenic dye products could be identified and substituted by non-mutagenic dye products. Tools were developed to integrate "mutagen-free textile production" in the marketing strategies.



The project was finished in May 2003. More detailed information is presented on www.hydrotox.de (Downloads).

References:

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I. Jäger, K. Schneider, P. Janak, D. Fues: Die europäische Textilbranche stellt ein erfolgreiches Projekt vor: Produktion wird sicherer für Verbraucher, Arbeitnehmer und für die Umwelt. (European Textile Industry Successfully Completed a European CRAFT Project and Made Production Safer for Consumers, Workers and the Environment). Melland 2003, submitted.

I. Jäger, Ch. Hafner, C. Welsch, K. Schneider, E. Bollhalder, W. Hofer, J. Westendorf: Mutagenicity in the Ames test of madder root in dyeing processes of the textile industry. *Toxicology* 2003, submitted.

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