EFFECTS OF TRICHLOROETHYLENE AND TRIMETHOPRIM ON CHANGES IN THE ACTIVITY OF ENZYMES INVOLVED IN THEIR METABOLISM

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ABSTRACT
Introduction: The aim of the study was to analyse the effects of the combined exposure to trichloroethylene fumes and trimethoprim on changes in the activity of selected enzymes involved in the metabolism of these xenobiotics in the rat liver and kidney.

Material and Methods: The activity of arylhydrocarbon hydroxylase (AHH), aminopyrine N-demethylase (AD) and glutathione S-transferase (GST) was assayed.

Results: The results of the study indicated that the tested compounds affect the activity of the enzymes of phase I metabolism, which is confirmed by changes in the activity of AHH and AD. These changes seem to be organ-specific. On the other hand, no significant changes in GST activity in the rats after treatment with tested compounds were observed.

Conclusion: The noted imbalance between the induction of phase I and phase II metabolizing enzymes may play an important role in elucidating the toxicity of trichloroethylene and trimethoprim.

Key words: trichloroethylene, trimethoprim, cytochrome P450, glutathione S-transferase

Received for publication: December 7, 2006
Approved for publication: December 20, 2006

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