



## Evaluation of the irritating influence of carane derivatives and their antioxidant properties in a deoxyribose degradation test

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### Abstract:

Previous studies of the propranolol monoterpene derivative (–)-4-[2-hydroxy-3-(N-isopropylamino)-propoxyimino]-*cis*-carane hydrochloride (KP-23) and its diastereoisomers, KP-23R and KP-23S, demonstrated different effects on the cyclic AMP generating system as well as anti-inflammatory, analgesic, antihistaminic and antioxidant activity. The present study examined the influence of KP-23 and its diastereoisomers KP-23R and KP-23S on the skin-irritating activity and the mucous membrane-irritating activity as well as their influence on a late-type contact allergy in the *in vivo* tests. The hydroxyl radical scavenging potential of the three analogues was evaluated using their ability to inhibit Fe(II)/H<sub>2</sub>O<sub>2</sub>-induced oxidative degradation of 2-deoxyribose (2-DR) in the *in vitro* tests. The results obtained indicated that the hydroxyamine carane derivative did not evoke irritative changes and did not induce a late-type contact allergy in the guinea-pig. Diastereoisomers of KP-23 exhibit antioxidant properties in a dose-dependent manner and protected against OH-radicals generated from the Fenton reaction.

### Key words:

carane derivatives, contact allergy, deoxyribose, drug effects, free radical

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