

研究简报

# 四种消毒剂的急性毒性试验和微核试验

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**摘要** 背景与目的: 为确保强氯净消毒剂、聚维酮碘溶液、高浓度臭氧水消毒机(以下简称高浓度臭氧水), 和中性强化戊二醛等4种消毒剂在使用时的安全, 对其分别进行了急性毒性和致突变毒性评价。材料与方  
 法: 小鼠急性经口毒性试验和小鼠骨髓嗜多染红细胞微核试验。结果: 强氯净消毒剂灌胃后2 150 mg/kg以上剂量  
 组小鼠出现被毛无光泽、活动减少等中毒症状, 其半数致死量(LD50)雌性为3 690 mg/kg, 95%可信区间为2  
 270~5 990 mg/kg; 雄性为2 710 mg/kg, 95%可信区间为1 670~4 410 mg/kg。表明强氯净消毒剂属低毒物质; 聚  
 维酮碘溶液和高浓度臭氧水染毒后小鼠活动、饮食正常, 未见死亡。雌雄小鼠LD50均大于10 000 mg/kg; 中性强  
 化戊二醛染毒后4 640 mg/kg以上组出现活动减少, 被毛无光泽, 体重减轻等中毒症状, 部分动物死亡, 但LD50  
 大于5 000 mg/kg, 属实际无毒级物质。小鼠骨髓嗜多染红细胞微核试验结果表明, 4种消毒剂各剂量组不同性别  
 动物骨髓嗜多染红细胞微核率与阴性对照组比较差异均无显著性, 试验结果为阴性, 即对体细胞无诱变作用。  
 结论: 强氯净消毒剂LD50小于5 000 mg/kg, 属低毒级物质, 提示该消毒剂在生产、运输、使用过程中要注意  
 安全。聚维酮碘溶液、高浓度臭氧水和中性强化戊二醛LD50均大于5 000 mg/kg, 属实际无毒级物质。4种消毒  
 剂小鼠骨髓嗜多染红细胞微核试验结果表明无致突变作用。

关键词 [消毒剂](#); [急性毒性](#); [致突变毒性](#)

## Acute Toxicity and Mutagenicity Tests of Four Species Disinfectants

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**Abstract** **BACKGROUND & AIM:**To test the acute toxicity and the mutagenicity of Qianglilu disinfectants, Juweitongdian solution, High consistence Ozonic water generator and neuter consolidated Glutaraldehyde. **MATERIAL AND METHODS:**The oral acute toxicity tests and micronucleus test of polychromatic erythrocytes in bone marrow of rats. **RESULTS:** LD50 of Qianglilu disinfectants were 3 690 mg/kg in female rats and 2 710 mg/kg in male rats. LD50 of Juweitongdian solution and High consistence Ozonic water in rats were more than 10 000 mg/kg. LD50 of neuter consolidated Glutaraldehyde in rats were more than 5 000 mg/kg. The micronucleus rats in all doses and in different sex were not significantly different from the control group ( $P>0.05$ ), respectively. **CONCLUSION:** Qianglilu disinfectants is low toxic materials. Juweitongdian solution, High consistence Ozonic water and neuter consolidated Glutaraldehyde are not toxic materials in fact. The mutagenicity of four species disinfectants were not observed in the study.

**Keywords** [disinfectants](#) [acute toxicity](#) [mutagenicity](#)

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