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### 热带爪蟾胚胎对三丁基锡致畸作用响应的敏感时期

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### Sensitive periods of teratogenic effects of tributyltin on *Xenopus tropicalis* embryos

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**摘要** 采用200 ng · L<sup>-1</sup> 氯化三丁基锡对热带爪蟾(〔WTBX〕*Xenopus tropicalis*〔WTBZ〕)胚胎进行第1天、第2天、第3天和3 d全暴露实验.结果表明,第3天和3 d全暴露组胚胎的存活率比对照组分别降低了10%和20%,第2天、第3天和3 d全暴露组的体长分别减少了30%、20%和39%.暴露组胚胎畸形率均在90%以上,畸形类型主要包括眼睛变大、变小或变形、泄殖腔突出、鳍变窄或无鳍和尾巴弯曲等.其中,第2天暴露组胚胎的眼比对照组的小,而第3天暴露组胚胎的眼明显变大;第1天暴露组胚胎的背鳍略有变窄,第2天暴露组胚胎的鳍严重缺失并有尾尖残留或缺刻的现象,第3天暴露组胚胎的背鳍和腹鳍均稍有变窄.由此可见,三丁基锡引起的热带爪蟾胚胎眼和鳍的畸形表现出明显的暴露时段性特征.

**关键词:** 三丁基锡 (TBT) " href="#">三丁基锡 (TBT) 爪蟾 胚胎 致畸

**Abstract:** *Xenopus tropicalis* embryos were exposed to 200 ng · L<sup>-1</sup> tributyltin chloride (TBTCl) during different periods in the experiment of three days. The percent of survival embryos decreased by 10% in the 3rd, 20% in 3 d treatment groups, respectively. The whole body length reduced by 30% in the 2nd day, 20% in the 3rd day and 39% in 3 d treatment groups, respectively. More than 90% embryos showed malformations in treatment groups. The main characteristic malformations were abnormal eyes, enlarged proctodaeum, narrow fins or absence of fins, bent tails, etc. Compared with the control, the eyes were smaller in the 2nd day and bigger in the 3rd day treatment groups, respectively. The dorsal fins were a little narrower in the 1st day treatment group, both dorsal and ventral fins were much narrower with tail-tip residue or gap near the proctodaeum in the 2nd day treatment group, and the fins were slightly narrower in the 3rd day treatment group, respectively. The results suggest that the malformations in the eyes and fins were more sensitive to different exposure periods.

**Key words:** tributyltin (TBT) " href="#">tributyltin (TBT) *Xenopus tropicalis* embryos teratogenesis

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