

## **Effects of Triphenyltin Chloride (TPTCl) on Development of Reproductive Organs in Male Rats**

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Triphenyltin chloride (TPTCl) is an organotin that is approved for use as a fungicide on major food and food-stock crops. TPTCl is also used in antifouling paints and bioaccumulated in the food chain like tributyltin. TPTCl has been shown to have a strong effect on the development of imposex in the rock shell. In the study of two-generation reproductive toxicity in rat, TPTCl has been shown to decrease litter size, pup weight, relative spleen/thymus weight in weanling. But there are scarcely reports identifying effects of TPTCl on development of reproductive organs in male rats before and after puberty period. Therefore, in this studies, we compared the effects of TPTCl on development of reproductive organs between 5-week-old and 7-week-old SD male rats. We dosed to SD male rats with TPTCl (0, 1, 5, 10, and 15mg/kg/day) daily by gavage for 14 days. In 5-week-old, TPTCl(10 and 15mg/kg/day) significantly decreased the weights of testes, epididymis, prostate and cowper's gland. The weights of seminal vesicle was significantly decreased in a dose-dependent manner at the dose of 1mg/kg/day and above. And the weights of LABC 5mg/kg/day and above. In 7-week-old, TPTCl(15mg/kg/day) significantly decreased the weights of epididymis, seminal vesicle and cowper's gland. The weights of prostate and LABC was significantly decreased at the dose of 5mg/kg/day and above. The weights of testes was unaffected. Seminal vesicle was the most sensitive organ in 5-week-old, whereas prostate in 7-week-old. TPTCl significantly affected reproductive organs at the dose of 1mg/kg/day in 5-week-old, whereas not in 7-week-old. From above results, we found that TPTCl affected the development of reproductive organs in male rats and was more sensitive to 5-week-old than 7-week-old. This work was supported by the Korea FDA Grant KFDA-04131-EDS-301.

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