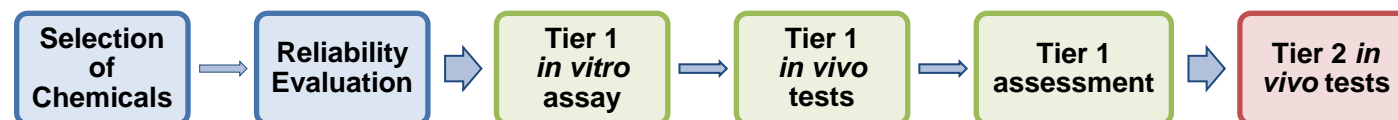


Triphenyl phosphate (CAS no. 115-86-6)

[Current status]

Finished Tier 2 *In vivo* tests



Results of Reliability Evaluation (based on literature information)

Estrogenic							
Estrogenic	Anti-estrogenic	Androgenic	Anti-androgenic	Thyroidal	Anti-thyroidal	Ecdysone	Others*
P	P	-	P	-	-	-	P

P: Effects suggested by existing information

-: Effects NOT suggested by existing information

*Others: Hypothalamic-Pituitary-Gonad Axis etc.

Results of Tier 1 *in vitro* tests

Tested Mode of Actions							
Estrogenic	Anti-estrogenic	Androgenic	Anti-androgenic	Thyroidal	Anti-thyroidal	Ecdysone	Others*
P	N	-	N	-	-	-	-

P: EC₅₀ or IC₅₀ values were detected

N: EC₅₀ or IC₅₀ values were not detected

*: etc.

To be implemented: Mode of actions selected but not tested yet

-: Mode of actions not selected for testing

Results of Tier 1 *in vivo* tests

An increase in male hepatic vitellogenin level was not observed at sublethal concentrations to suggest estrogenic effect. It was not concluded that triphenyl phosphate is an estrogenic compound. Regarding antiandrogenic activity, this study is not designed to detect it.

Since a significant decrease was observed in female hepatic vitellogenin level in this study, antiestrogenic activity should be tested in Tier 1 *in vitro* Test.

Results of Tier 2 *In vivo* tests

The Medaka Extended One-Generation Test (MEOGRT: OECD TG240)

Fish were exposed to 0.501, 1.62, 4.54, 15.2 and 48.4 µg/L (measured mean concentrations) for 19 weeks. At levels where no significant in hatching rate of F1 was not observed (1.62 µg/L and lower), a significant decrease in female (F1 adult) liver vitellogenin level was observed. Thus, triphenyl phosphate was suggested to be anti- estrogenic and anti-steroidogenic.

At 48.4 µg/L, a significant decrease was observed in total egg, fertile egg, and survival (4 weeks post fertilization, adult male), indicating reproductive toxicity to Medaka. The lowest observed effect concentration (LOEC) was 44.9 µg/L as a data from Tier 1 *in vivo* test, which was ca. 1,870 times as high as the highest environmental water concentration of 0.024 µg/L that was measured in MOE's Environmental Survey and Monitoring of Chemicals in FY2017.

The exposure level which did not indicate reproductive toxicity to Medaka was 15.2 µg/L and ca. 630 times as high as the highest environmental water concentration of 0.024 µg/L that was measured in MOE's Environmental Survey and Monitoring of Chemicals in FY2017.