

[BIO16]

The effect of palm vitamin E on fetal and newborn development in rats

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Palm Vitamin E, an extract from palm oil containing high amount of tocotrienol. It has been shown to have no toxicological effects when fed to young albino mice and Sprague Dawley rats within the range of 250mg/kg body weight (b.w.) to 2500mg/kg b.w. tocotrienol. However, thus far there has been no report of toxicological evaluation of tocotrienol intake on fetal and newborn development in rats. The present study therefore was undertaken to investigate the effect of Palm vitamin E on fetal and newborn development in rats following maternal feeding with various doses of Palm Vitamin E. Pregnant rats were treated orally with 0, 100, 250, 500 and 1000mg/kg b.w. Palm Vitamin E from day 1 until day 13 of gestation. Number of implantation observed were between 9 to 11 embryos per mother, which corresponded to the number of corpora lutea released. No significant different were observed on the implantation rate between control and treated rat. The resorption rate for treated rat was within the normal range between 5-7%. These results show no adverse effect on the reproductive performances upon giving high dosages of Palm Vitamin E to pregnant rat. Feeding Palm Vitamin E does not alter their gestational period and number of pups delivered which between 8-10 pups per litter. Pups from mother rat supplemented with Palm Vitamin E showed no abnormalities in their birth weight and their overall postnatal growth as compared to control. Therefore, it is suggested that maternal intake of Palm Vitamin E up to dose 1000mg/kg b.w. by normal pregnant rats have no adverse affects on perinatal development.