

The test examines the estrogenic (hormonal) potential of a compound or test material. Estrogenic/hormonal activity can lead to detrimental effects during the embryonic, infantile, and juvenile development. In the E-Screen assay, the human breast cancer cell line MCF-7 is used, which shows an increased growth if a hormonally effective chemical is present\*. The increase in proliferation will be determined with a colorimetric test which is measured photometrically. 17 $\beta$  estradiol is used as positive control.

The test principle and specification is described in the NICEATM "Pre-Screen Evaluation of the In Vitro Endocrine Disruptor Assay (MCF7 Cell Proliferation Assay of Estrogenic Activity)" NICEATM (NTP Center for the Evaluation of Alternative Toxicological Methods), October 16, 2006.

\*Lippman M.E. et al. 1976. The effects of estrogens and antiestrogens on hormone-responsive human breast cancer in long-term tissue culture. *Cancer Res* 36: 4595-4601  
KB et al. 1975. MCF-7 : a human breast cancer cell line with estrogen, androgen, progesterone and glucocorticoid receptors. *Steroids* 26: 785-795

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