In vitro approach to investigating the free radical generation of endocrine disruptor

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We investigated Free radical generation of endocrine disruptor, bisphenol A and alkyl esters of phthalic acid (DEP, DBP) using lipid peroxidation, enzyme assay (SOD, Catalase, Gpx-px), Cell viability and phototoxicity. Bisphenol A are monomers of various plastics including polycarbonates and epoxy resins which are used in numerous consumer products. The release of BPA from some of these materials has recently been reported. Diethyl phthalate, Dibutyl phthalate has many industrial uses, as a solvent and vehicle for fragrance and cosmetic ingredients and subsequent skin contact. We focuses on its safety in use as a solvent and vehicle for fragrance and cosmetic ingredients and effect on skin. BPA generated free radical, increased lipid peroxidation, damaged antioxidant system and Cell viability was dose-dependently increased. Also alkyl ester of phthalic acid generated free radical but slightly. The generation of free radical induced by endocrine disruptor was inhibited by antioxidant and free radical scavenger. The result of the study are demonstration on free radical induced by endocrine disruptor and this result may be useful for evaluating toxic effects of endocrine disruptor

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