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Evaluation of Intestinal Dioxin Permeability Using Human Caco-2 Cell Monolayers

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A system to evaluate the intestinal permeability for 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) was constructed with human intestinal Caco-2 cell monolayers. TCDD was added to the apical side of the cell monolayers and the basal TCDD concentration was estimated by using a HepG2 cell having a luciferase vector with a xenobiotic-responsive element in the promoter region. Addition of such food substances as chlorophyll to the apical side of the Caco-2 cell monolayers markedly decreased the apical-to-basal transport of TCDD. This system would be useful for use in searching for the materials having an inhibitory activity to intestinal TCDD absorption.

Keywords: [intestinal permeability](#), [dioxins](#), [Caco-2 cell](#), [food factor](#)



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