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## Effects of (+)-, (-)- and (±)-Indenestrols A and B on Microtubule Polymerization\*

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Indenestrol A (IA) is a metabolite of diethylstilbestrol (DES), and indenestrol B (IB) is an analog of IA. IA was simply obtained from E,E-dienestrol in the presence of dilute sulfuric acid, and a mixture of IA and IB was formed by thermal cyclization of E,E-dienestrol. In order to elucidate the effects of optically active IA and IB on microtubule assembly, the IA and IB enantiomers were separated to >99% purity by high-pressure liquid chromatography using a chiral column. The di(4-bromobenzoate) of (-)IB was analyzed by X-ray crystallography and its absolute structure was determined as C(3)-S. The (+)-, (-)- and (±)- indenestrols A and B were shown to be inhibitors of microtubule assembly *in vitro* using microtubule proteins from porcine brain. (±)-IB is more active than (±)-IA, and the order of inhibitory activity of the enantiomers on microtubule assembly was (+)-IB > (+)-IA > (-)-IA > (-)-IB.

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\*\* 三共株式会社・分析.