

助成年度：平成 18 年度

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[課題]

紙パルプ廃水の先進的有効利用法の検討

[内容]

The paper mill wastewater was fractionated by solid-phase extraction combined with the C18 disk and florisil cartridge. Estrogen receptor antagonist activity of the fractions was assessed using a yeast two-hybrid assay by incorporating the human estrogen receptor α . The fractions that exhibited a positive assay response were analyzed by gas chromatography-mass spectrometry (GC-MS). MeOH fraction was the most active fraction, and the EC50 value corresponded to the concentration ratio of 4.9-fold. In this fraction, ethyl pimarate, methyl dehydroabietate, methyl abietate, pimaric acid, isopimaric acid, dehydroabietic acid, and abietic acid that are known as wood extractives were identified by GC-MS. All of the tested 6 compounds showed greater activity than 4-hydroxy-tamoxifen (a positive control) in a yeast two-hybrid assay.