

**2-bromo-1-(2-hydroxyphenyl)-3,4-dimethylpentan-1-one:  
A New Bromo-Compound with Stimulatory Activity  
Isolated from the Shed Leaves of Teak, (*Tectona grandis* L.)**

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**ABSTRACT**

A new Bromo isotopic compound has been isolated and purified from the Methanol Fraction of Teak leaves (MFTk). Chromatographic and spectral analyses (TLC, UV, MS, NMR, and IR) indicated the compound to be 2-bromo-1-(2-hydroxyphenyl)-3,4-dimethylpentan-1-one, in short, BrHPDMP with molecular weights 285 and 287. The whole leaf leachate of teak showed strong inhibitory activity in bioassay. But when fraction-4 (Methanolic fraction of teak leaf) was isolated and purified, it showed concentration dependent stimulatory activity on rice seeds. At 1000 ppm concentration, it showed 12.82% inhibition in shoot and 15.59% stimulation in root length. Below this concentration, it showed stimulatory effects on both shoot and root length. At 500ppm, it revealed 10.04% stimulation in shoot length and 34.16% stimulation in root length. At a concentration of 31.25ppm, it revealed maximum stimulatory effects i.e. 16.26% stimulation in shoot length and 42.78% stimulation in root length.

*Key Words:* teak (*Tectona grandis* L.), allelochemical, Bromo-compound, agroforestry species, growth stimulator.