





Tannic acid or commonly called tannins are compounds found in mangrove bark, one of which is used as a dye. Based on the Central Statistics Agency (BPS) from 2018 to 2020, there was an increase in exports of dyes (dyes and the like, both synthetic and organic, and processed thereof) by 3.43%.

This plant will have a capacity of 720 tons/year with a fixed capital of Rp. \$ 2.348.400,82 + Rp 131.612.674.820,51 and working capital of 44.416,80 + Rp 18.329.577.651,13. Utility needs include 80.98 kW of electricity, and 3,1491 m³/hour of brackish water. This plant is planned to be established in 2025 on Amutu Island, Teluk Bintuni Regency, West Papua on a land area of 3 ha and employs at least 144 people. Based on the evaluation of economic feasibility, the value of ROI before tax is 28,55%, ROI after tax is 22,27%, POT before tax is 2,62 years, POT after tax is 3,14 years, BEP is 44.04%, SDP of 20,34% and DCFRR of 26,14% so that this plant is interesting to study further.

Keyword: *chemical plant, mangrove wood bark extraction, natural dye, tannic acid*