

## PENGARUH METODE PENYADAPAN DAN LAMA WAKTU PENYIMPANAN GETAH TERHADAP RENDEMEN DAN KUALITAS GONDORUKEM

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### ABSTRAK

Gondorukem merupakan residu yang dihasilkan dari proses destilasi getah pinus. Gondorukem (*resina colophonium*) adalah zat kompleks yang dihasilkan setelah terpentin dalam getah pinus diuapkan. Rendemen dan kualitas gondorukem dipengaruhi oleh beberapa faktor yang diantaranya adalah faktor internal pohon, faktor lingkungan tempat tumbuh pohon maupun faktor perlakuan manusia terhadap pohon maupun getah hasil sadapannya. Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan metode penyadapan getah dan lama waktu penyimpanan getah terhadap rendemen dan kualitas gondorukem yang dihasilkan.

Penelitian ini dilakukan dengan model rancangan acak lengkap dengan dua faktor, yaitu metode penyadapan dan lama waktu penyimpanan getah. Faktor metode penyadapan terdiri dari dua aras (metode koakan dan bor) dan faktor lama penyimpanan getah terdiri dari tiga aras (3, 4 dan 5 minggu) dimana setiap aras terdiri dari tiga ulangan. Metode pemasakan yang digunakan adalah metode destilasi dengan pemasakan langsung menggunakan pemanas listrik. Gondorukem dihitung rendemennya dan diuji kualitasnya berdasarkan SNI 7636:2020 meliputi titik lunak, bilangan asam, kadar kotoran dan kadar komponen menguap.

Hasil penelitian diperoleh rendemen gondorukem antara 60,24% - 70,31% dengan rendemen terbesar diperoleh dari metode penyadapan bor dengan lama penyimpanan 35 hari. Kualitas gondorukem yang dihasilkan memiliki titik lunak 68,67°C - 76,33 °C; bilangan asam 183,96 – 190,51; kadar kotoran 0,05% - 1,12%; kadar komponen menguap 3,19% - 4,36%. Gondorukem dengan kualitas terbaik didapat dari hasil pengolahan getah yang diambil dengan metode penyadapan bor dan disimpan selama 21 hari yang memenuhi parameter bilangan asam, titik lunak, dan kadar bahan tak larut toluena berdasarkan.

**Kata kunci :** *metode penyadapan, lama waktu penyimpanan, getah, gondorukem, rendemen, kualitas*



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## THE EFFECT OF TAPPING METHOD AND STORAGE DURATION ON GONDORUKEM YIELD AND QUALITY

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### ABSTRAK

Gondorukem is a residue produced from the distillation process of pine resin. Gondorukem (rosin colophonium) is a complex substance formed after the turpentine in pine resin evaporates. The yield and quality of gondorukem are influenced by several factors, including internal tree factors, environmental factors in the tree's growth location, and human treatment of both the tree and the tapped resin. This research aims to investigate the effects of different methods of tapping resin and the duration of resin storage on the yield and quality of gondorukem produced.

This study was conducted using a completely randomized design model with two factors: tapping method and the duration of resin storage. The tapping method factor consisted of two levels (coak and bore methods), and the resin storage duration factor consisted of three levels (3, 4, and 5 weeks), with each level having three replications. The distillation method used was direct distillation using electric heating. Gondorukem yield was calculated, and its quality was tested based on SNI 7636:2020, including softening point, acid number, impurity content, and volatile component content.

The research results showed gondorukem yields ranging from 60.24% to 70.31%, with the highest yield obtained from the bore tapping method with a storage duration of 35 days. The produced gondorukem had softening points ranging from 68.67°C to 76.33°C, acid numbers between 183.96 and 190.51, impurity content ranging from 0.05% to 1.12%, and volatile component content between 3.19% and 4.36%. The highest quality gondorukem was obtained from resin processed using the bore tapping method and stored for 21 days, meeting the parameters for acid number, softening point, and toluene-insoluble content.

**Keywords :** *tapping method, storage duration, resin, gondorukem, yield, quality.*