

PENGARUH SURFAKTAN, PELARUT, DAN GAS PROPELAN TERHADAP
KUALITAS AEROSOL MINYAK ROSEMARY (*Rosmarinus officinalis*) SEBAGAI
PENGHARUM RUANGAN

SKRIPSI

diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar Sarjana Sains
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**PENGARUH SURFAKTAN, PELARUT, DAN GAS PROPELAN TERHADAP KUALITAS AEROSOL MINYAK
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Sebuah skripsi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar
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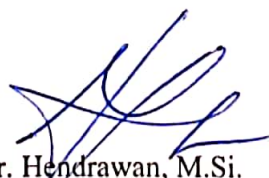


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ABSTRAK

Minyak rosemary memiliki bau yang menyegarkan dan memiliki berbagai manfaat bagi kesehatan sehingga memungkinkan untuk dijadikan sebagai pengharum ruangan dengan efek aromaterapi. Banyak jenis pengharum ruangan, salah satunya yang paling banyak digunakan adalah dalam bentuk aerosol. Pengharum ruangan aerosol memerlukan gas yang biasa disebut dengan propelan untuk mendorong bahan aktif wewangian dari wadah, air yang berfungsi sebagai pelarut, serta surfaktan yang berguna untuk menyatukan air dan minyak rosemary agar menjadi homogen dan mudah diaplikasikan. Penelitian ini bertujuan untuk mengetahui pengaruh surfaktan terhadap emulsi serta pengaruh pelarut dan gas propelan terhadap kualitas aerosol minyak rosemary sebagai pengharum ruangan. Tahapan penelitian meliputi analisis kandungan minyak rosemary menggunakan instrumen GC-MS, formulasi konsentrat (emulsi dari minyak rosemary, surfaktan dan aquades), uji kestabilan konsentrat, dan formulasi pengharum ruangan aerosol menggunakan gas N₂ dan LPG dari konsentrat terpilih yang dibandingkan dengan formula konsentrat berbasis etanol beserta pengujian performanya. Hasilnya didapatkan bahwa surfaktan tween 80 menghasilkan emulsi yang lebih stabil dibandingkan dengan glucam P20 dan campuran tween 80 – glucam P20. Emulsi dengan kestabilan terbaik diperoleh pada pencampuran 0,4% tween 80 dengan 1% minyak rosemary. Pelarut air menghasilkan semprotan yang lebih basah dan bobot semprotan lebih berat dibandingkan dengan pelarut etanol yang menghasilkan semprotan lebih halus (lebih menyebar) dan bobot semprotan lebih ringan. Gas N₂ menghasilkan jumlah semprotan yang lebih sedikit pada tiap formula dibandingkan dengan LPG yang menghasilkan jumlah semprotan lebih banyak pada penggunaan formula berbasis etanol.

Kata kunci: Minyak rosemary, pengharum ruangan, aerosol, emulsi

ABSTRACT

Rosemary oil has a refreshing smell and has various health benefits and allows it to be used as an air freshener with aromatherapy effects. There are many types of air freshener, one of them is aerosol the most widely used by society. Aerosol air freshener requires a gas commonly called a propellant to push the active ingredient of fragrances from the container, water which is used as a solvent, and surfactants which is used for unifying water and rosemary oil to make it homogeneous and easy to apply. This study aims to determine the effect of surfactants on emulsion and the effect of solvents and propellant gases on the aerosol quality of rosemary oil as air freshener. This research involve analysis of rosemary oil using the GC-MS instrument, concentrate formulations (emulsion from rosemary oil, surfactants, and distilled water), concentrate stability testing, and aerosol air freshener formulations using N₂ and LPG from selected concentrates compared to ethanol-based concentrate formulations with its performance testing. The results showed that tween 80 produced more stable emulsion compared to glucam P20 and a mixture of tween 80 – glucam P20. The best emulsion was obtained by mixing 0.4% tween 80 with 1% rosemary oil. Water solvent produces wetter spray and heavier spray weight than ethanol solvent which produces more spread spray and lighter spray weight. N₂ gas produces less spray in each formula compared to LPG which produces more spray in the use of ethanol based formulas.

Keywords: Rosemary essential oil, air freshener, aerosol, emulsion

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