

Combination of Pandan Leaves and Jintan Leaves Extract with Peppermint Oil as a Dental Pain Relief Mouthwash: PANJIMINT

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Abstrak

Pandemi COVID-19 membawa perubahan bagi masyarakat dunia di semua bidang tak terkecuali di Indonesia. Salah satunya adalah bidang kesehatan dengan perubahan mekanisme. Menurut Kementerian Kesehatan Republik Indonesia (2021) pasien dengan nyeri gigi perlu dilakukan *skrining* sebelum dapat berkunjung ke dokter gigi. Padahal nyeri gigi memiliki sejumlah dampak yang kurang baik karena keluhan nyeri gigi akan mengganggu aktivitas sehari-hari penderita di segala usia. Daun pandan wangi (*Pandanus amaryllifolius*) merupakan kearifan lokal dengan kandungan zat alkaloida, saponin, flavonoida, tanin, polifenol, fenil propanoid, dan zat warna sebagai antibakteri dan antinyeri (Wibowo, 2015). Daun Jintan (*Coleus amboinicus Lour*) merupakan kearifan lokal yang bisa mengobati nyeri karena mengandung flavonoid dan polifenol yang memiliki daya analgesik. (Ramadhan and Hastuti, 2016). Aroma khas yang timbul dari daun jintan membuat penggunaannya merasa tidak nyaman (Rinjani, 2021). Sehingga ditambahkan minyak peppermint yang dapat menambah rasa segar dan efek antibakteri. Bentuk sediaan obat kumur dipilih karena mudah diperoleh dan praktis digunakan sendiri oleh masyarakat tetapi kandungan chlorhexidine memiliki efek samping. Oleh karena itu, sebagai pertolongan awal untuk meredakan nyeri gigi dan melihat potensi lokal daun pandan wangi dan daun jintan pada era Pandemi COVID-19 dibuatlah PANJIMINT yang merupakan obat kumur pereda nyeri gigi. Penelitian ini menggunakan metode refluks untuk mengambil ekstraksi daun kemudian dicampurkan dengan bahan lain. Kemudian sampel diuji pH, uji daya hambat bakteri, uji organoleptik dan hedonik, uji efektivitas terhadap penderita nyeri gigi, dan uji stabilitas sediaan obat kumur. Hasil dari penelitian ini komposisi obat kumur PANJIMINT dengan 8% ekstrak daun pandan, 6% ekstrak daun jintan, 0,15 % minyak peppermint yang dilarutkan dengan aquades 100 ml. Suhu optimal penyimpanan pada suhu kamar ($28^{\circ}\text{C} \pm 2^{\circ}\text{C}$) dengan hasil diameter zona hambat adalah 11,510 mm. Efek analgesik dibuktikan dengan waktu penyembuhan 1 menit 55 detik.

Kata kunci: daun pandan wangi, daun jintan, obat kumur, pereda nyeri gigi, minyak peppermint.

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Abstract

The COVID-19 pandemic has brought changes in every sector around the world, including Indonesia. One of them is the health sector with changing of mechanisms. According to the Ministry of Health of the Republic of Indonesia (2021), patients with dental pain need to be screened before visiting a dentist. Even though dental pain has several side effects because dental pain will interfere with the daily activities of sufferers at all ages. Pandan leaves (*Pandanus amaryllifolius*) is one of local wisdom that contains alkaloids, saponins, flavonoids, tannins, polyphenols, phenylpropanoids, and dyes as an analgesic also antibacterial (Wibowo, 2015). Jintan leaves (*Coleus amboinicus Lour*) are easy-to-grow and easily cultivated plants in Indonesia that can treat pain because they contain flavonoids and polyphenols, which have analgesic properties. (Ramadan and Hastuti, 2016). However, the distinctive aroma from jintan leaves makes the user feel uncomfortable (Rinjani, 2021). Therefore added peppermint oil which can add a fresh taste and antibacterial effect. Mouthwash was chosen because it is easy to obtain and practical to use for the public, but the chlorhexidine content has side effects. Therefore, as an initial aid to relieve dental pain and see the local potential of pandan leaves and jintan leaves in the era of the COVID-19 Pandemic, PANJIMINT was made to solve that problem. This study uses the reflux method to extract the leaves and then combine them with other ingredients. Then the samples were tested for pH, bacterial resistance tests, organoleptic and hedonic tests, effectiveness tests against dental pain patients, and stability tests. The result from this study are the composition of PANJIMINT mouthwash with 8% pandan leaves extract, 6% jintan leaves extract, 0.15% peppermint oil dissolved in 100 ml of distilled water. The optimal storage temperature was at room temperature ($28\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$) with the result that the diameter of the inhibition zone was 11,510 mm. Analgesic effect is evidenced by a healing time of 1 minute 55 seconds.

Keywords: pandan leaves, jintan leaves, dental pain, mouthwash, peppermint oil.