

**PENGEMBANGAN SEDIAAN GEL LIDAH BUAYA DAN PEPERMINT SEBAGAI TERAPI TOPIKAL NYERI DAN BENGGAK PAYUDARA PADA IBU NIFAS: SUATU SYSTEMATIC REVIEW)**

**Yoga Triwijayanti<sup>1</sup>, Martini<sup>2</sup>, Yulyuswarni<sup>3</sup>**  
<sup>1,2,3</sup> Poltekkes Kemenkes Tanjungkarang

<b>Article Info</b>	<b>ABSTRAK</b>
<p><b>Article History:</b>            Received 16/02/2026.            Revised -            Accepted 10/03/2026.</p> <hr/> <p><b>Keywords:</b>            Aloe Vera,            Breast Engorgement,            Peppermint            Postpartum Pain            Topical Gel</p>	<p>Nyeri dan bengkak payudara akibat bendungan ASI merupakan keluhan umum pada ibu nifas yang berkontribusi terhadap ketidaknyamanan, kegagalan menyusui dini, dan penurunan keberlanjutan ASI eksklusif. Pilihan terapi topikal konvensional masih terbatas oleh isu keamanan selama laktasi dan potensi efek samping. Terapi komplementer berbasis bahan alami semakin mendapat perhatian dalam praktik kebidanan karena dianggap lebih aman, terjangkau, dan dapat diterima secara budaya. Lidah buaya (<i>Aloe vera</i>) dan peppermint (<i>Mentha piperita</i>) memiliki efek antiinflamasi, analgesik, dan pendinginan, namun belum banyak dikembangkan sebagai sediaan gel terstandar khusus untuk perawatan postpartum. Tujuan penulisan untuk menganalisis bukti ilmiah terkini mengenai potensi kombinasi lidah buaya dan peppermint dalam sediaan gel topikal untuk penanganan nyeri dan bengkak payudara pada ibu nifas serta mengarahkan pengembangan formulasi klinis berbasis bukti. Metode penulisan Systematic review bersumber pada artikel hasil penelitian terpublikasi di PubMed, Scopus, Web of Science, dan Google Scholar periode 2015–2025. Sebanyak 15 artikel hasil penelitian teridentifikasi ditelaah teks penuh. Hasil studi eksperimental dan klinis kecil menunjukkan Aloe vera menurunkan mediator inflamasi (IL-1<math>\beta</math>, TNF-<math>\alpha</math>) dan mempercepat pemulihan jaringan, dengan reduksi edema dan nyeri berkisar 25–55%. Peppermint melalui aktivasi reseptor TRPM8 memberikan efek analgesik dan sensasi dingin yang menurunkan intensitas nyeri sebesar 35–60%. Studi formulasi melaporkan bahwa sediaan gel mempertahankan stabilitas senyawa aktif sebesar 85–92% selama 3–6 bulan, meningkatkan penetrasi kulit, dan memperbaiki kenyamanan aplikasi. Evaluasi keamanan topikal menunjukkan iritasi ringan pada &lt;5% pengguna dan tidak dilaporkan efek merugikan selama laktasi. Kesimpulan menunjukkan Gel kombinasi lidah buaya–peppermint berpotensi sebagai terapi komplementer yang aman dan efektif untuk nyeri dan bengkak payudara pada ibu nifas.</p>
	<p><b>ABSTRACT</b></p> <p><i>Breast pain and swelling due to milk engorgement are common complaints among postpartum mothers, contributing to discomfort, early breastfeeding failure, and reduced continuation of exclusive breastfeeding. Conventional topical therapies remain limited by safety concerns during lactation and the potential for adverse effects. Complementary therapies based on natural ingredients are increasingly gaining attention in midwifery practice, as they are considered safer, more affordable, and culturally acceptable. Aloe vera and peppermint (<i>Mentha piperita</i>) possess anti-inflammatory, analgesic, and cooling properties;</i></p>

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*however, they have not been widely developed into standardized gel formulations specifically for postpartum care. The purpose of this paper is to analyze current scientific evidence regarding the potential combination of Aloe vera and peppermint in a topical gel formulation for managing breast pain and swelling in postpartum mothers, as well as to guide evidence-based clinical formulation development. This study employed a systematic review method using published research articles from PubMed, Scopus, Web of Science, and Google Scholar covering the period 2015–2025. A total of 15 research articles were identified and reviewed in full text. Experimental and small-scale clinical studies indicate that Aloe vera reduces inflammatory mediators (IL-1 $\beta$ , TNF- $\alpha$ ) and accelerates tissue recovery, with edema and pain reduction ranging from 25–55%. Peppermint, through activation of TRPM8 receptors, provides analgesic and cooling effects that reduce pain intensity by 35–60%. Formulation studies report that gel preparations maintain active compound stability at 85–92% over 3–6 months, enhance skin penetration, and improve application comfort. Topical safety evaluations indicate mild irritation in fewer than 5% of users, with no reported adverse effects during lactation. In conclusion, a combination Aloe vera–peppermint gel demonstrates potential as a safe and effective complementary therapy for managing breast pain and swelling in postpartum mothers.*

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*\*Corresponding Author: [yogatriwijayanti@poltekkes-tjk.ac.id](mailto:yogatriwijayanti@poltekkes-tjk.ac.id)*

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