

INTISARI

Hand hygiene merupakan salah satu langkah pencegahan yang efektif terhadap penyebaran *Coronavirus* melalui transmisi fomit. Penggunaan produk *hand hygiene* seperti sabun dan *sanitizer* yang terlalu sering memiliki dampak buruk bagi kulit, ekonomi maupun lingkungan. *Edible coating* merupakan pelapis suatu produk. *Edible coating* berbahan kitosan bersifat elastis, transparan, non toksik dan biokompatibel. Tujuan penulisan *narrative review* ini adalah mengkaji potensi *edible coating* kitosan sebagai pelapis permukaan tangan untuk mengurangi penggunaan *hand sanitizer*.

Pencarian literatur dari *database PubMed, ScienceDirect dan Wiley Online Library* dengan menggunakan kata kunci SARS-CoV-2, COVID-19, *fomite transmission, hand washing, hand sanitizer, kitosan, film dan edible coating* yang dipadukan menggunakan boolean operator AND dan OR. Berdasarkan ketiga *database* tersebut didapatkan 680 jurnal yang kemudian dilakukan seleksi dengan kriteria inklusi, eksklusi dan duplikasi sehingga didapatkan jurnal yang digunakan sebanyak 68 jurnal.

Sifat mekanik yang dimiliki *film* kitosan menunjukkan bahwa *film* memiliki elastisitas yang tinggi untuk melakukan deformasi atau perubahan bentuk dan kekuatan yang memadai untuk menyesuaikan dengan bentuk produk. *Film* kitosan memiliki kemampuan antibakteri, antifungi maupun antivirus. *Edible coating* kitosan berpotensi sebagai pelapis permukaan tangan.

Kata kunci : SARS-CoV-2, *fomite transmission, hand sanitizer, kitosan, edible coating*.

ABSTRACT

Hand hygiene is one of the effective preventive measures against the spread of *Coronavirus* through fomite transmission. The frequent use of hand hygiene products such as soap and sanitizers have a negative impact on the skin, the economy and the environment. Edible coating is a coating of a product to avoid contamination. Edible coating chitosan are elastic, transparent, non-toxic, and biocompatible. The purpose of this narrative review writing is to examine the potential of edible coating chitosan as a hand surface coating to reduce involve the use of hand sanitizer.

Literature search from the PubMed, ScienceDirect and Wiley Online Library *databases* using the keywords SARS-CoV-2, COVID-19, fomite transmission, hand washing, hand sanitizer, chitosan, film, and edible coating combined the Boolean operators AND also OR. Based on the three *databases*, 680 journals were obtained which were then selected using inclusion, exclusion, and duplication criteria so that 68 journals were found.

The mechanical properties of chitosan film indicate that the film has high elasticity to deform or change shape and adequate strength to adapt to the shape of the product. Chitosan film has characteristic as antibacterial, antifungal and antiviral. Chitosan edible coating has a potential as a hand surface coating.

Keywords: SARS-CoV-2, fomite transmission, hand sanitizer, chitosan, edible coating.