

Letter to Editor

A Traditional Chinese Herbal Hand Sanitizer for COVID-19

Siukan Law^{1*}

¹ Faculty of Science and Technology, The Technological and Higher Education Institute of Hong Kong, Tsing Yi, New Territories, Hong Kong

Received: 08.10.2021; Accepted: 15.04.2022

***Corresponding Author:** Siukan Law, Faculty of Science and Technology, The Technological and Higher Education Institute of Hong Kong, Tsing Yi, New Territories, Hong Kong. Email: siukanlaw@hotmail.com.

Please cite this article as: Law S. A Traditional Chinese Herbal Hand Sanitizer for COVID-19. *Herb. Med. J.* 2022;7(2):75-6.

Dear Editor

As a mainstay of efforts, hand hygiene is effective in preventing the spread of acute respiratory syndrome coronavirus 2 (SARS-CoV-2) during the COVID-19 outbreak. The World Health Organization (WHO) has stated two formulations for alcohol-based sanitizers as follows:

(1) Ethanol (80% vol/vol), Glycerine (1.45% vol/vol), Hydrogen peroxide (0.125% vol/vol);

(2) Isopropanol (75% vol/vol), Glycerine (1.45% vol/vol), Hydrogen peroxide (0.125% vol/vol) (1, 2).

These formulations of alcohol sanitizers inhibit or deactivate the growth of coronavirus and cause lysis of the virus-cell membrane for death. However, alcohol sanitizers cannot be used for a long time because their long-term use results in skin problems, e.g. allergy. Some people's hands would be peeling and itching. How do we optimize this? We may prolong a protection period on the skin for virus infection. There is a traditional Chinese herbal hand sanitizer proposed to be used against for COVID-19. The disinfection is more durable by additional traditional Chinese medicinal herbs in alcohol-based sanitizers. 75% alcohol is used as a disinfect. If

Astragalus, *Lonicerae Japonicae Flos*, *Forsythiae Fructus* and other traditional Chinese herbs are added to alcoholic sprays, the effect of disinfecting would be longer.

"*Astragalus*" contributes to the regulation of blood circulation (vital energy), invigoration of body fluid circulation, protection of the flow of blood to fight against the attack of pathogens, and strengthens "blood deficiencies". This is also a potential anti-viral agent to combat the SARS-CoV-2 (3).

"*Lonicerae Japonicae Flos*", and "*Forsythiae Fructus*" tonify the "qi" to protect from external pathogens, disperse wind and discharge heat, and resolve dampness to boost up an immune system. These are the anti-inflammatory agents to prevent the attack of SARS-CoV-2 (4).

The mechanism of traditional Chinese herbs (*Astragalus*, *Lonicerae Japonicae Flos*, *Forsythiae Fructus*) for disinfection are according to the anti-viral property because they consist of prevalent compounds such as kaempferol and quercetin which inhibit papain-like protease (PLpro) and 3C-like protease (3CLpro) to stop the replication of SARS-CoV-2, block the spike glycoprotein binding to an angiotensin-converting enzyme 2 (ACE2) receptor,

and destroy its virus membrane for preventing SARS-CoV-2 invade (5)

According to the physician Chen Chen-Hong and based on further modification, the proposed production of traditional Chinese herbal hand sanitizer steps are as follows (6):

- (i) Weigh 10-15g of single traditional Chinese herbal and wash it;
- (ii) Add 200mL of water and soak it for half an hour;
- (iii) Transfer the soaked traditional Chinese herb with liquid into the pot;
- (iv) Boil it (<35°C) for 15mins until yellow liquid appears (do not decoct for too long to avoid volatilization of effective ingredients);
- (v) Cool down the mixture;
- (vi) Filter the dregs, and take the supernatant of a concoction;
- (vii) Take 20mL of the concoction, add 80mL of 95% alcohol in the ratio of 1:4, and mix it well;
- (viii) Collect and dispense the Chinese medicine disinfectant into small spray bottles.

All of the above-mentioned information demonstrate that there is a simple way to produce a traditional Chinese herbal hand sanitizer for fighting against COVID-19 which is more durable than alcohol-based sanitizers and prevents human skin allergies.

Acknowledgments

None.

Conflict of Interest

The authors declare that they have no conflict of interest.

References

1. WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge Clean Care Is Safer Care. Geneva: World Health Organization. 2009;12:WHO-recommended handrub formulations.
2. Abuga K, Nyamweya N. Alcohol-Based Hand Sanitizers in COVID-19 Prevention: A Multidimensional Perspective. *Pharmacy*. 2021;9:64.
3. Law S, Lo C, Han J, Leung A, Xu C. Traditional Chinese herb, *Astragalus*: possible for treatment and prevention of COVID-19?. *Herba Polonica*. 2021;66(4):79-84.
4. Luo H, Tang QL, Shang YX, Liang SB, Yang M, Robinson N, et al. Can Chinese Medicine Be Used for Prevention of Corona Virus Disease 2019 (COVID-19)? A Review of Historical Classics, Research Evidence and Current Prevention Programs. *Chinese Journal of Integrative Medicine*. 2020;26(4):243-50.
5. Zhang DH, Wu KL, Zhang X, Deng SQ, Peng B. In silico screening of Chinese herbal medicines with the potential to directly inhibit 2019 novel coronavirus. *Journal of Integrative Medicine*. 2020;18:152-158.
6. Home cleaning to prevent COVID-19, Physician Chen Shin-Hong disinfection of traditional Chinese medicine DIY from Taiwan News, 2021.

© Siukan Law. Originally published in the Herbal Medicines Journal (<http://www.hmj.lums.ac.ir>), 12.07.2022. This article is an open access article under the terms of Creative Commons Attribution License, (<https://creativecommons.org/licenses/by/4.0/>), the license permits unlimited use, distribution, and reproduction in any medium, provided the original work is properly cited in the Herbal Medicines Journal. The complete bibliographic information, a link to the original publication on <http://www.hmj.lums.ac.ir/>, as well as this copyright and license information must be included