

The Importance of Hand Washing Against COVID-19

As we all heard and learned from the media, the CDC and the World Health Organization (WHO) and as I mentioned in the COVID-19 webinar last week, hand washing is one of the most important measures that we should all take in the fight against the spread of SARS-CoV-2 that causes COVID-19 disease.

To recap what I mentioned in my presentation, the CDC made the following recommendation: *“Wash your hands often with soap and water for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing. **If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60% alcohol. Always wash hands with soap and water if hands are visibly dirty.**”*

Also, it was reported that washing hands with soap and water for 20 seconds will help reduce the spread of the infectious COVID-19.

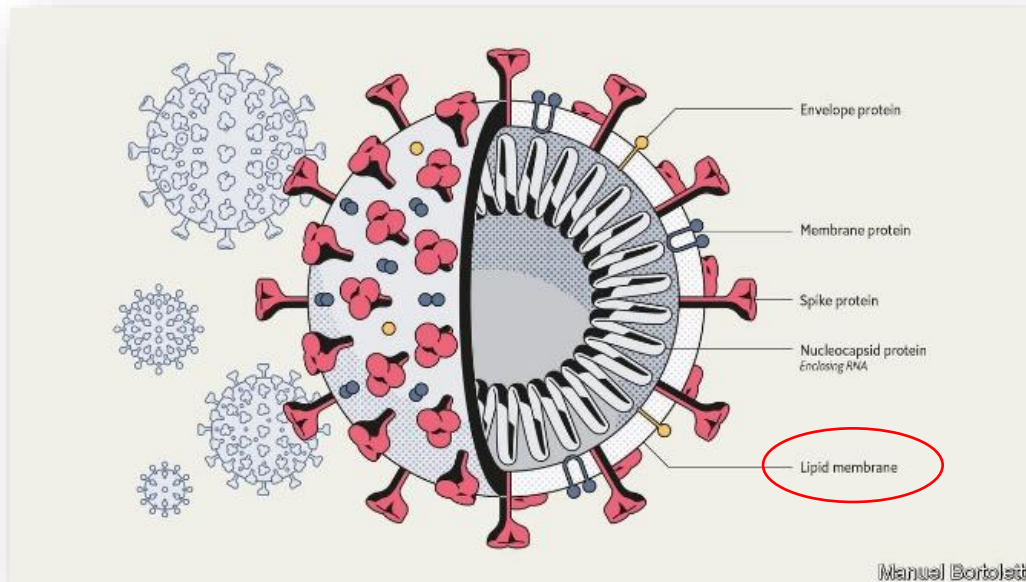
So Why Is Following the Proper Hand Washing Procedure So Important?

We have always heard that soap and water don't kill germs – the fact is that hand sanitizers and hand soaps do not carry any claims against any microorganisms. Hand soaps chemically and mechanically remove germs or microorganisms from the hands by pulling off soils (grease, food residues, skin-oil, etc.) from the hands. In fact, if the hands are visibly dirty or have food on them, soap and water are more effective than using only hand sanitizers, because the proteins and fats in food residues on the hands tend to reduce the sanitizer's antimicrobial power. This is one of the main reasons why the use of soap and water is still favored in the food industry.

With SARS-CoV-2 (or SARS Coronavirus-2), however, there are some theories out there that proper hand washing with soap and water has a twofold or double action against the virus. In order to understand the first theory, let's recall what I discussed during the webinar regarding the structure of the COVID-19 virus.

As shown in the image below, SARS-CoV-2 consists of genetic material surrounded by an envelope with crown-like protein spikes. (“Corona” is Latin for “crown”, hence the virus' name). The SARS-CoV-2 envelope consists of a **lipid bilayer membrane** that helps anchor some functional

proteins onto the viral envelope. The lipid layer in the envelope is of a fatty acid origin - and fatty acids are the building blocks for fats and greases.



Theories of the Double Action of Hand Washing Against SARS-CoV-2:

- 1. Theory One** - with the SARS-CoV-2 structure in mind, this theory believes that when you wash your hands with soap and water, the soap molecule buries its way into the virus' lipid bilayer-and-protein envelope. (Fortunately, the chemical bonds that hold the virus components together aren't very strong). So, this soap intrusion into the virus' envelope is enough to break the viral coat or envelope. When that happens, the soap will break the virus apart by making it soluble in water, and the virus will disintegrate into harmless pieces. These harmless pieces get flushed down the drain with water during the rinsing step.
- 2. Theory Two** – this is the most common theory. Hand washing with soap and water dissolves and breaks down the soils and greases from the hands and then washes them and the clinging viruses and bacteria down the drain.

Regardless of the 1st theory, soap and water will wash away viruses and bacteria from your hands. However, for the soap and water to work effectively in either theory, soap and water should have enough contact time with the hands and its soils and viruses. **And that's why it's recommended to wash your hands for at least 20 seconds.**



Why 20 Seconds, You Ask?

Usually the skin on the hands has wrinkles, and it takes time for the soap to penetrate into the wrinkles and remove the viruses that hide within. Additionally, the soap itself needs a few moments to chemically interact with the soils and germs and loosen them from the skin. That's why 20 seconds is recommended for proper hand washing.

Now remember, alcohol hand sanitizers can also destroy viruses in a similar way because alcohol can dissolve some organic matter and greases from your hands and destroy coronaviruses. However, to have the same effect as the hand soap and water, you will need to use high concentrations of alcohol in enough amounts to cover your entire hands and stay on them for at least 1 minute. However, when your hands are heavily soiled, the use of alcohol sanitizer alone is not good enough to destroy SARS-CoV-2. That's why the CDC recommended that when you have heavily soiled hands, wash your hands with soap and water first then use alcohol sanitizer.

Remember, most of the hand soaps have the same above effects or actions against SARS-CoV-2. However, as you know, in **food processing areas**, it is only allowed to use E1 and E2-rated hand soaps. E2 products are hand washing and sanitizing compounds. E2 products are accepted as sanitizing based on an equivalency to 50 ppm chlorine. E1 products are "general" hand wash products that are permitted for use in processing areas but do not meet the criteria for sanitizing.

On the other hand, E4 hand care products are creams, lotions, and cleaners that are limited to areas such as office areas, bathrooms, dressing rooms and breakrooms, where hands do not touch processed foods. **This means all AFCO and ZEP hand soaps can help your customer in their fight against COVID-19.**

The following are ZEP/AFCO hand soaps that can be used at customers' sites.

- **Handwashing and Sanitizing Compounds for Use in All Departments (E2):**
 1. **E-2 Sanitizing Hand Soap** (Prd.# 0920)
 2. **E-2 Foaming Sanitizing Hand Soap** (Prd.# 0994)
 3. **FS Antimicrobial Hand Cleaner** (Prd.# 0901)
 4. **FS Antimicrobial Foaming Hand Cleaner** (Prd.# 0996)
 5. **FS Antimicrobial Hand Cleaner – Fuzion** (Prd.# 1338)
 6. **FF Sanitizing Hand Cleaner** (Prd.# 0940)
 7. **Sanifect Foam E-II** (Prd.# AF5508) - in SAP but not stocked



- **Handwashing Compounds for Use in All Departments (E1):**
 1. **Foam Handwash - Fuzion** (Prd.# 1245)
 2. **Applaud Lotion Hand Soap** (Prd.# 3385)
 3. **Delight Liquid Hand Soap** (Prd.# 0914)
 4. **Sani-Slash** (Prd.# AF5510)
 5. **Wyandotte Prevent** (Prd.# 6011) - available in NAV system, not in SAP
 6. **Hand Soap** (Prd.# 6022) - available in NAV system, not in SAP

- **Hand Creams, Lotions, and Cleaners Not for Use in Edible Processing Areas (E4):**
 1. **Acclaim Hand Soap Antibacterial** (Prd.# 3149)
 2. **Fuzion Antibacterial Foaming Hand Soap** (Prd.# 3388)
 3. **Velvet Lotion Soap** (Prd.# 0958)
 4. **Applaud Antibacterial Lotion Hand Soap** (Prd.# 3385)
 5. **Tranquil Meadows Antibacterial Hand Soap** (Prd.# 3387)
 6. **Mango Antibacterial Hand Soap** (Prd.# 3338)

AFCO/Zep is eager to help you with your sanitation and personal hygiene needs during this difficult, COVID-19-pandemic time.

Thank you for your business and for being a valuable customer. We are proud to be your partners.

For more information about AFCO/Zep hand care products, please call your local representative.