



DODLA KOUSALYAMMA GOVERNMENT COLLEGE FOR WOMEN

Nellore, Andhra Pradesh - 524003

Autonomous College, College with Potential For Excellence

Re-accredited with 'A' Grade by NAAC



PREPARATION OF HERBAL HAND SANITIZER



DEPARTMENT OF CHEMISTRY

2020-2021

REQUIRED CHEMICALS

- ISOPROPYL ALCOHOL--750ml
(OR)
ETHANOL
- HYDROGEN PEROXIDE—14ml
- GLYSEROL-----14ml
- STERILE DISTILLED -----222ml

(OR)

BOILED COLD WATER

Aloe Vera gel---PINCH OF AMOUNT

Fragrance:

Cinnamon, clove, eucalyptus, lavender, peppermint, rosemary, thyme, or thieves. Stir the ingredient together using a spatula until everything is smooth.

PROCEDURE

1. Combine the aloe Vera gel or glycerin with the isopropyl alcohol in a clean container. To get one cup of sanitizer, combine $\frac{1}{3}$ cup of gel or glycerin with $\frac{2}{3}$ cup of rubbing alcohol.
2. Mix thoroughly with your spoon or whisk to ensure that the alcohol is evenly distributed throughout the gel.
3. Stir in five drops of an essential oil, if you're using it. This is entirely optional and is only meant to improve the scent of the sanitizer.
4. Store the sanitizer in an air-tight container. Alcohol evaporates with time, so an air-tight container will keep your sanitizer effective for longer. A pump or squeeze bottle can minimize evaporation while keeping your sanitizer easily accessible — just make sure the container for your sanitizer is clean and air-tight.

How to use hand sanitizer

Two things to be aware of when using hand sanitizer:

- You need to rub it into your skin until your hands are dry.
- If your hands are greasy or dirty, you should wash them first with soap and water.

With that in mind, here are some tips for using hand sanitizer effectively:

1. Spray or apply the sanitizer to the palm of one hand
2. Thoroughly rub your hands together. Make sure you cover the entire surface of your hands and all your fingers.
3. Continue rubbing for 30 to 60 seconds or until your hands are dry. It can take at least 60 seconds, and sometimes longer, for hand sanitizer to kill most germs.

What germs can hand sanitizer kill?

According to the CDC Trusted Source, an alcohol-based hand sanitizer that meets the alcohol volume requirement can quickly reduce the number of microbes on your hands.

It can also help destroy a wide range of disease-causing agents or pathogens on your hands, including the new corona virus, SARS-CoV-2.

However, even the best alcohol-based hand sanitizers have limitations and don't eliminate all types of germs.

According to the CDC, hand sanitizers won't get rid of potentially harmful chemicals. It's also not effective at killing the following germs:

- corona virus
- *Cryptosporidium*, which causes cryptosporidiosis
- *Clostridium difficile*, also known as *C. diff*

Also, a hand sanitizer may not work well if your hands are visibly dirty or greasy. This may happen after working with food, doing yard work, gardening, or playing a sport.

If your hands look dirty or slimy, opt for hand washing instead of a hand sanitizer.

Handwashing vs. hand sanitizer

Knowing when it's best to wash your hands, and when hand sanitizers can be helpful, is key to protecting yourself from the new corona virus as well as other illnesses, like the common cold and seasonal flu.

While both serve a purpose, washing your hands with soap and water should always be a priority, according to the CDC. Only use hand sanitizer if soap and water isn't available in a given situation.

It's also important to always wash your hands:

- after going to the bathroom
- after blowing your nose, coughing, or sneezing

- before eating
- after touching surfaces that could be contaminated

The CDC lists specific instructions Trusted Source on the most effective way to wash your hands. They recommend the following steps:

1. Always use clean, running water. (It can be warm or cold.)
2. Wet your hands first, then turn the water off, and lather your hands with soap.
3. Rub your hands together with the soap for at least 20 seconds. Make sure to scrub the back of your hands, between your fingers and under your nails.
4. Turn the water on and rinse your hands. Use a clean towel or air dry.

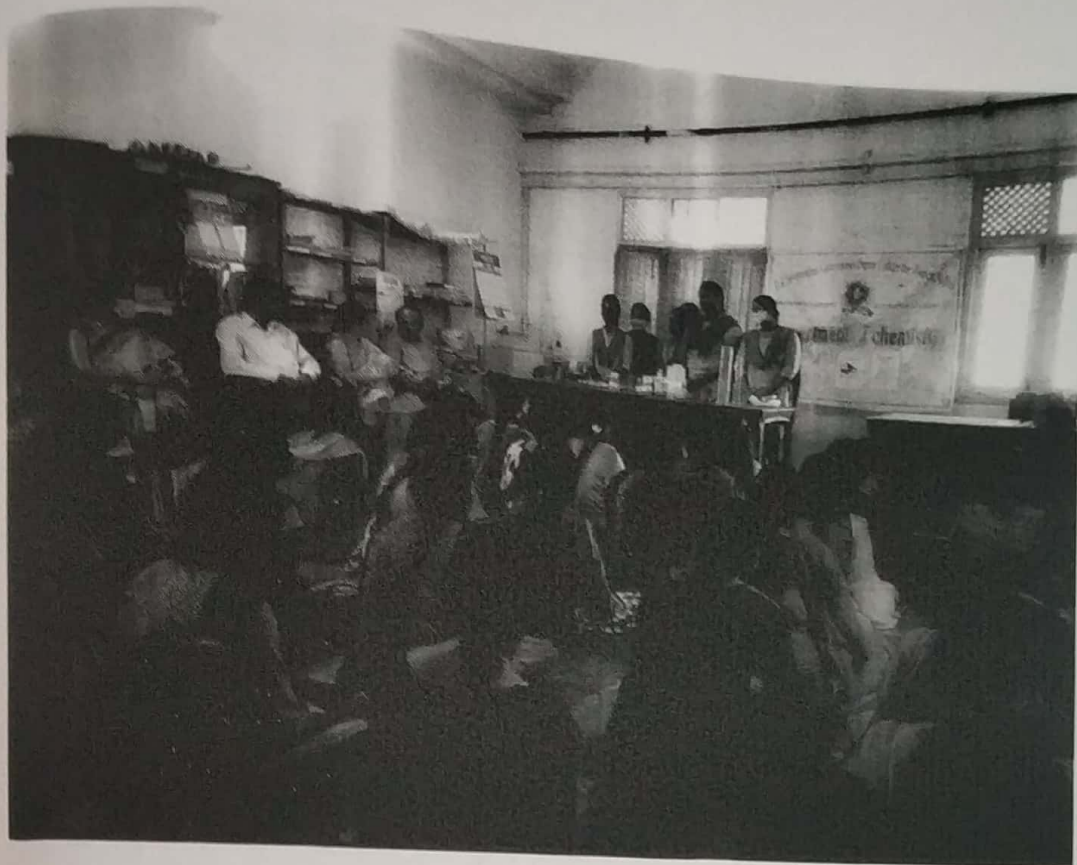
Hand sanitizer is a handy on-the-go way to help prevent the spread of germs when soap and water isn't available. Alcohol-based hand sanitizers can help keep you safe and reduce the spread of the new corona virus.

If you're having a hard time finding hand sanitizer at your local stores and hand washing isn't available, you can take steps to make your own. You only need a few ingredients, such as rubbing alcohol, aloe Vera gel, and an essential oil or lemon juice.

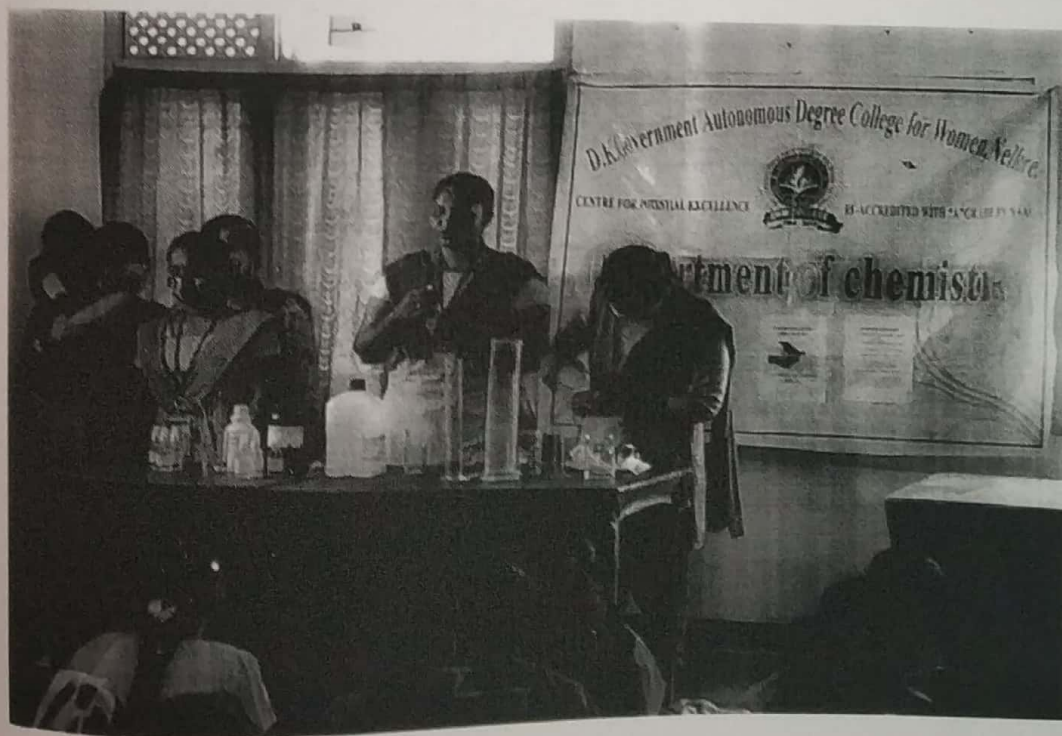
Although hand sanitizers can be an effective way of getting rid of germs, health authorities still recommend hand washing whenever possible to keep your hands free of disease-causing viruses and other germs.

DISADVANTAGES OF HAND SANITIZERS

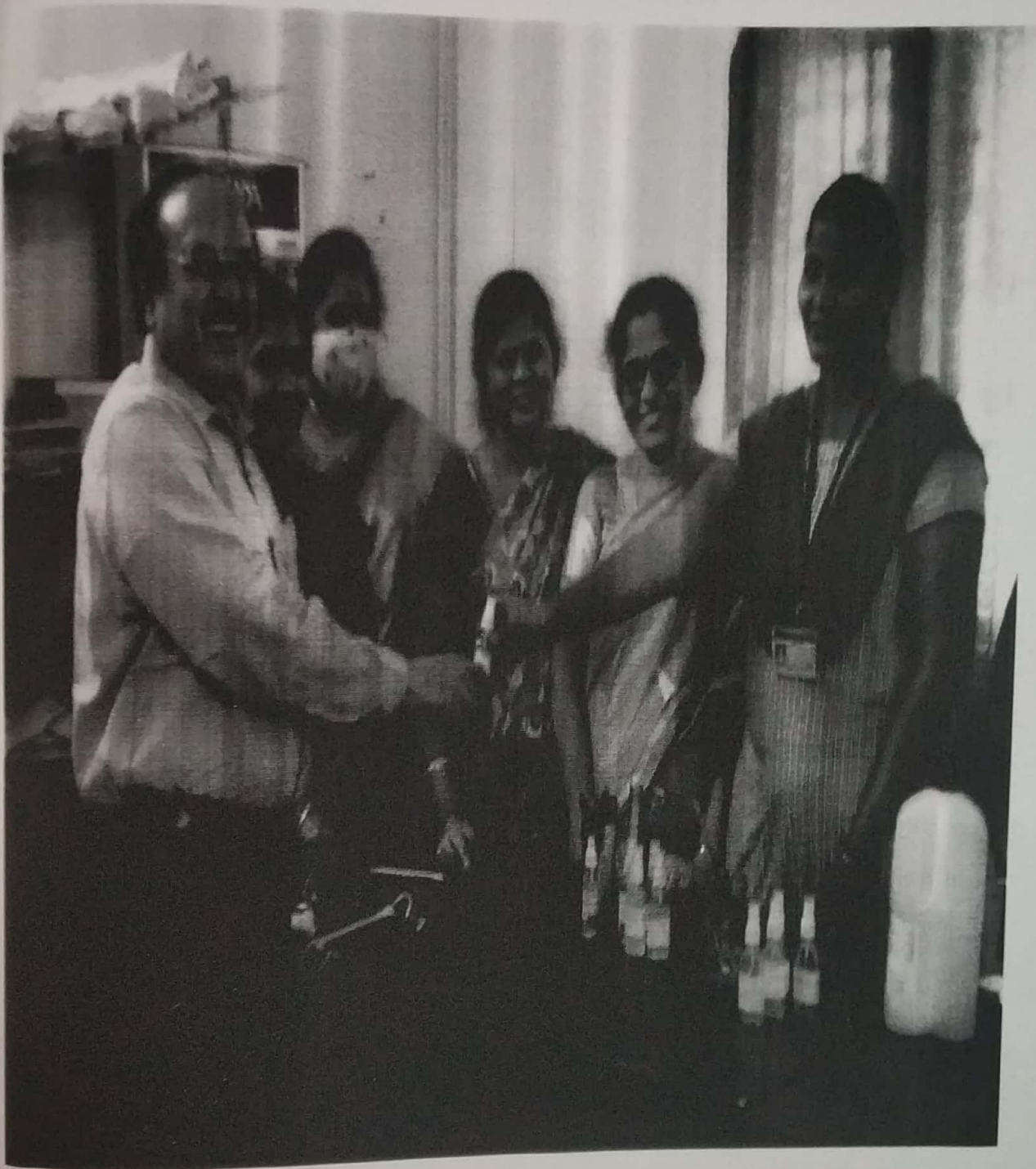
- When used too frequently, alcohol-based hand sanitizers can wash away your skin's natural oils, which can cause drying and cracking. Dehydrated skin can be unattractive and irritating, and it is likely to cause one or more of the following symptoms: Itching. Slight to severe flaking, scaling, or peeling.
- The hand sanitizers contained as much as 81 percent toxic methanol, also known as wood alcohol. The chemical can cause blindness and death if ingested. "Methanol can dehydrate the skin, causing dry skin, and can result in
- *Hand sanitizers are harmful to your health. However, if you use hand sanitizer too much, the alcohol can cause minor skin irritation. "Using too much hand sanitizer dries your hands oWhen used too frequently, alcohol-based hand sanitizers can wash away your skin's natural oils, which can cause drying and cracking. Dehydrated skin can be unattractive and irritating, and it is likely to cause one or more of the following symptoms: Itching. Slight*
- SKIN AND RISK OF INFECTION: Gray, ashy skin color ,Redness Deep cracks that may bleed
- **FIRE HAZARD:***Most hand sanitizers on the market contain a high volume of alcohol, enough to be considered a fire hazard. In fact, "alcohol-based hand sanitizers are classified as Class I Flammable Liquid substances, which means they have a flashpoint of less than 100 degrees Fahrenheit" (source). OSHA has specific guidelines regarding the storage and use of these flammable liquids:*
- Clean up spilled hand sanitizer with water immediately.
- Store alcohol-based hand sanitizers away from all heat and ignition sources, including sparks, open flames, and electrical outlets.
- Do not allow children to use or access hand sanitizer unless properly supervised by an adult.
- Store alcohol-based hand sanitizers in secure locations that do not experience extremely hot temperatures.



Our principal sir Inauguration of the program



Students are preparing herbal hand sanitizer



Our college principal ^{purchases} perches the sanitizer bottle



Our college Staff and students ^{purchase} perches the sanitizer bottles

DK GOVT COLLEGE (A) FOR WOMEN NELLORE

PREPARATION OF HERBAL HAND SANITIZER

PROGRAMME

06-02-2021

SNO	Name of the Student	Group	Signature of the student
1.	G. Mahima	1 st MBC	<i>[Signature]</i>
2.	Sk Salma	1 st MBC	Sk Salma
3.	R. Srivalli	1 st AZC	R. Srivalli
4.	G. Nishantha	1 st AZC	G. Nishantha
5.	T. Mounika	1 st AZC	T. Mounika
6.	G. Manjula	1 st (AZC)	G. Manjula
7.	N. Saleena	1 st (AZC)	N. Saleena
8.	G. Marutha	1 st (BZC)	G. Marutha
9.	V. Srija	1 st (BZC)	<i>[Signature]</i>
10.	N. Kiranmai	1 st (BZC)	N. Kiranmai
11.	Sk. Reena Sadhaf	1 st (BZC)	Sk. Reena
12.	M. Meghana	1 st (BZC)	M. Meghana
13.	B. Samitha	1 st (BZC)	B. Samitha
14.	R. Pallavi	1 st (B.com)	R. Pallavi
15.	P. Geetha	1 st (B.com)	P. Geetha
16.	K. Lakshmi	1 st (B.com)	K. Lakshmi
17.	M. Sushma	1 st B.com (CA)	M. Sushma
18.	Ch. Kavya	1 st B.com (CA)	Ch. Kavya
19.	N. Bhavana	1 st B.com (CA)	N. Bhavana
20.	P. Akhila	1 st B.com (CA)	P. Akhila

[Signature]
6/2/2021

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PRINCIPAL
06.02.2021