### A PROJECT REPORT ON

# PREPARATION OF HAND SANITIZER

**Submitted by** 

B.ANUSHA(20077104445004)

**B.MUNNI** 

**B.SRAVANTHI** 

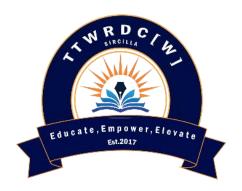
**D MAHESHWARI** 

**Under the Guidance of** 

Dr. E. Anitha, Ph.D.

&

**HoD, Department of Chemistry** 



**Department of Chemistry** 

Telangana Tribal Welfare Residential Degree College (W)

Rajanna Sircilla-505473

(Affiliated to Satavahana University)

(2022-2023)

# TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE (W) THANGALLAPALLY, RAJANNA SIRCILLA (AFFILIATED TO SATAVAHANA UNIVERSITY)

## **CERTIFICATE**

ganthe

Signature of the Guide

Signature of the Principal

K. Rojani

Principal
TTWRDC(W)SIRCILLA
Dist: Rajanna Sircilla

# **Preparation of Hand Sanitizer**

**Objective:**Objective of this project is togive the training to the chemistry students in preparation of the hand sanitizer and to raise the awareness about hand hygiene to prevent the spread of infectious diseases like Covid -19.

The purpose is to give training to the Chemistry as well as Life Science students.

**Materials:**Isopropyl alcohol or ethanol, hydrogen peroxide, glycerol, aloe vera gel, eucalyptus, peppermintoil and boiled cold water.

#### **Introduction:**

Hand sanitizer has become more popular than ever, in large part due to its effectiveness during the COVID-19 pandemic. Hand sanitizer has proven itself useful in killing germs. Hand sanitizer products kill germs on your hands and other surfaces on contact, helping to slow the spread of transmissible diseases like COVID-19.

Hand sanitizer, also called hand antiseptic agent applied to thehands for the purpose of removing disease-causing organisms. Hand hygiene isone of the most important measures to prevent the spread of infectious diseases. Hand sanitizer use is recommended when soap and water are not available for hand washing or when repeated hand washing compromises thenatural skin barrier.

Although the effectiveness of hand sanitizer is variable, it isemployed as a simple means of infection control in a wider areas such as daycare centres, schools, hospitals, health care clinics and super markets. As aresult of rising awareness about hand hygiene and its benefits, there has been aconstant increase in demand of hand sanitizers.

Hand sanitizer is a handy on-the-go way to help prevent the spread of germs when soap and water aren't available. Alcohol-based hand sanitizers can help keep you safe and reduce the spread of pathogens. Hand sanitizers typically come in foam, gel, or liquid form. This project profile envisages preparation of of alcohol based liquid hand sanitizer.

**Formulation:** As per **WHO** guidelines, the sanitizer must contain at least 70% of alcohol, one percent of Hydrogen Peroxide and 10% of Glycerine and the rest is the distilled water

#### Formulation-I:

Ethanol 80% v/v, glycerol 1.45% v/v, hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) 0.125% v/v.

**Preparationas per WHO:**In one litre flask, 833.3 mlethanol (96% v/v), 41.7 mlH<sub>2</sub>O<sub>2</sub> (3%) and 14.5 mlglycerol (98%) are taken and top up the flask to 1000 ml with distilled water or water that has been boiled and cooled; shake the flask gently to mix the content.

**Formulation-II:**Isopropyl alcohol80% v/v, glycerol 1.45% v/v, hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) 0.125% v/v %,

**Preparationas per WHO:**Isopropyl alcohol (with a purity of 99.8%), 751.5 ml, b. H<sub>2</sub>O<sub>2</sub> 3%, 41.7 mlglycerol 98%, 14.5 ml are taken in 1000 ml graduated flask top up the flask to 1000 ml with distilled water or water that has been boiled and cooled; shake the flask gently to mix the content.

# Formulation-III

Isopropyl alcohol and aloe vera gel in 2;1 ratio, and a few drops of eucalyptus and peppermint oil.

#### **Evidence of success:**

The students used the laboratory made sanitizer with good results.