

## Hand Sanitizer (as per WHO guidelines)

### Team AVANA

AVANA in association with CATALYSIS GROUP prepared Hand Sanitizer (as per WHO guidelines) as a precautionary initiative to fight against COVID-19.

The preparation of Hand Sanitizer was executed in the CATALYSIS GROUP, Discipline of Chemistry, IIT INDORE under the supervision of Dr. Sanjay K. Singh. AVANA volunteers and the members of CATALYSIS GROUP prepared the sanitizer as per the WHO guideline on Mar. 18, 2020.

The composition of this Hand Sanitizer (for 500 mL test solution) was as follows

99.9% Ethanol: 333.33 mL (66.67 % v/v)

3% H<sub>2</sub>O<sub>2</sub>: 16.68 mL (0.1 % v/v)

98% Glycerol: 5.58 mL (1.137 % v/v)

Distilled Water: 44.1 mL

Aloe vera Gel: 100 mL

Debashis Panda, Vaishnavi Kulkarni and Soumyadip Patra of CATALYSIS GROUP and Rahul Anand, Aboli Dhawale, Shreya Deep, Vikas Kumar, Vivek Bhushan, and Madhvendra Chouhan of AVANA were involved in the preparation and execution of this work. (Please find few of the photographs of the same)



Extracted of Aloe vera gel

Calculations for proper composition



Preparation of Hand Sanitizer



Filling of Hand Sanitizers



Team with Hand Sanitizers