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Identification and Quality Control of Materials for Disinfectants by Means of Color Scales



Formulations according to WHO guidelines for handrub: https://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf





Identification and quality control of materials for disinfectants by means of $E_T(30)$ (dye RN 10081-39-7)

Material for WHO Formulation 2 Do not apply for disinfectants Methanol Ethanol Isopropyl alcohol (outdated: Methyl alcohol) (RN 64-17-5) (RN 67-63-0) toxic

Material for WHO Formulation 1

LMU

Quantification of the content of isopropyl alcohol in water-containing samples by means of a dye-assisted color comparison of ET(30) (dye RN 10081-39-7)

WHO2: Sample with a content of isopropyl alcohol according to WHO Formulation 2



60% 65% 70% 75% WHO2 80% 85% 90% 95% 100%

https://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf



Quantification of the content of ethanol in water-containing samples by means of a dye-assisted color comparison of ET(30) (dye RN 10081-39-7)

WHO1: Sample with a content of ethanol according to WHO *Formulation 1*



70% 75% 80% WHO1 85% 90% 95% 100%

https://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf



Production and application of a test kit

- 1. Preparation of a stock solution of ET(30) in acetone (dye RN 10081-39-7).
- 2. Dosing a defined volume, for example 10 mL, and marking the height.



Maximal concentration of $E_{T}(30)$ (no deeper-colored solutions).

3. Evaporation of acetone at room temperature or heated to below the boiling point (56°C) in a fire-protected and ventilated environment, then screw the cap for sealing.



The test kit is ready for use and may even be sent by post.

4. For testing: Fill the alcohol to be analyzed into the test kit up to the marked level and compare the shade of color with the color scale after the complete dissolution of the dye.

