



Alcohol-Based Hand Rub — Local Production Card

The two WHO formulations, for a pharmacy making 10 litres at a time when commercial supply is unaffordable or unavailable

Component	Formulation I (ethanol 80% v/v)	Formulation II (isopropanol 75% v/v)
Alcohol	Ethanol 96%: 8,333 ml	Isopropyl alcohol 99.8%: 7,515 ml
Hydrogen peroxide 3%	417 ml	417 ml
Glycerol 98%	145 ml	145 ml
Sterile distilled or boiled cooled water	to 10,000 ml	to 10,000 ml

Method

1. Pour the alcohol into a 10-litre glass or plastic container with a graduated mark.
2. Add the hydrogen peroxide with a measuring cylinder.
3. Add the glycerol; rinse the cylinder with water into the container.
4. Top up to the 10-litre mark with water. Close immediately to prevent evaporation.
5. Mix by shaking or with a clean paddle.
6. Fill final bottles (100 ml pocket, 500 ml dispenser). Quarantine 72 hours before use so the hydrogen peroxide destroys spores in the bottles and water.

Quality control and safety

- Check the final alcohol concentration with an alcoholmeter: 80% $\pm$ 4 (I) or 75% $\pm$ 4 (II) at 25 °C.
- Label every bottle: formulation, date of production, expiry (24 months if concentration verified), "for external use", "flammable", "keep away from eyes".
- Produce in a ventilated room with no open flame; store below 30 °C in closed containers; production room must not be used for anything else at the same time.
- Glycerol is the emollient; it may be reduced to 1.45% if hands feel sticky, never omitted entirely without a substitute emollient.

Cost. Local production typically costs a fraction of commercial hand rub per litre. Where a hospital pharmacy cannot do it, a district pharmacy can supply several facilities. This is the single cheapest intervention in infection prevention.

ASF standards: Universal Floor — hand hygiene (adapted means for Crisis and Transitional categories)