**Enhanced Emollient Hand Sanitizer**

**Products Highlighted:** *Floraesters® IPJ, Floraesters K-100® Jojoba, and Florasomes® Jojoba*

Alcohol-based hand sanitizers are proven effective in the reduction of microbial contaminants. In addition to providing effective antimicrobial properties, this formula contains Floratech ingredients that deliver jojoba emolliency and showcase Florasomes Jojoba, soft particles which deliver Vitamin E and are available in various size and color combinations.

### Mixing Procedure

1. Pour the deionized water of Phase A into a suitable vessel. Add the Florasolvs PEG-150 Hydrogenated Jojoba and mix with moderate propeller agitation until clear. Add the pre-mixed Carbopol ETD 2020 Polymer Gel to the deionized water and mix until uniform. Add the Glycerine 99.7% USP Kosher to the main mixing vessel and stir until uniform (see footnote 1).


3. While batch (Phase AB) is mixing, slowly add Phase C. Mix until the Simulgel 600 is completely dispersed. Mix batch with homomixer to ensure complete mixing of all components.

4. Slowly add ingredients of Phase D with sweep agitation to finish the batch.

### Phase Trade/Common Name | INCI Name | Manufacturer | %wt/wt
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A. Deionized Water | Water | - - - - | q.s.
Florasolvs® PEG-150 Hydrogenated Jojoba | Jojoba Oil PEG-150 Esters | The HallStar Company | 0.10
Carbopol® ETD 2020 Polymer Gel | Acrylates/C10-30 Alkyl Acrylate Crosspolymer (and) Water (and) Triethanolamine (and) Preservative Glycerin | The Lubrizol Corporation | 20.00
Glycerine 99.7% USP Kosher | - - - - | Acme-Hardesty Co. | 5.00
B. Ethanol Solutions 3, UN 1170, PG II, SDA 40-2, 200 Proof | Alcohol Denat. | Remet Corporation | 61.00
*Floraesters IPJ* | Isopropyl Jojobate (and) Jojoba Alcohol (and) Jojoba Esters | Floratech | 1.50
*RTD Alpha-Bisabolol Natural* | Bisabolol | The HallStar Company | 0.10
*Floraesters K-100 Jojoba* | Hydrolyzed Jojoba Esters (and) Jojoba Esters (and) Water (Aqu) | Floratech | 0.10
C. Simulgel 600 | Acrylamide/Sodium Acryloyldimethyltaurate Copolymer (and) Isohexadecane (and) Polysorbate 80 | Seppic | 2.50
D. Florasomes Jojoba MDS 10% | Jojoba Esters | Floratech | 0.50
*Vitamin E, Tequila Sunrise* | Jojoba Esters | Floratech | 0.50
Florasomes Jojoba SMS 10% | Jojoba Esters | Floratech | 0.50
*Vitamin E, Lapis* | Jojoba Esters | Floratech | 0.50

**Typical Properties:**

- **pH:** 6 - 7
- **Viscosity:** 1,000 - 1,900cP

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1. Carbopol ETD 2020 Polymer Gel Instructions:
   - Add 1.0% Carbopol ETD 2020 Polymer to deionized water with stirring. Allow time for the polymer to completely hydrate in the deionized water.
   - Add Kathon® CG as a preservative.
   - Neutralize the polymer system with triethanolamine (to pH 7) to create the final gel.
   - Add this complete gel system to Phase A of the formula.


3. Any color or combination of colors may be used.

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Note: The information herein is based on our research and the research of others and is believed to be accurate. No guarantee of accuracy is made and the products are provided without warranty, expressed or implied and upon condition that purchasers shall make their own tests to determine the suitability, stability or safety of such products for their particular purposes. Likewise, statements concerning the possible use of these products are not intended as recommendations to use these products in infringement of any patent or in the treatment, prevention, or cure of any medical condition. INCI/trade names must be verified with each manufacturer. This formula has not been tested for sanitizing efficacy, and the manufacturer is responsible for ensuring the efficacy of any hand sanitizer formula. (Cleared for Public Disclosure)

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**Efficacy Data Available** (ref. Poster 1: The Role of Hydrolyzed Jojoba Esters as a Unique Botanical Technology for Long-Acting Moisturization)