CONDITIONING HAND SOAP

No. 371

This hand soap provides both cleansing and softening properties.

**Formulation**

**INGREDIENTS:**

--- Phase 1 ---
Deionized Water
BIO-TERGE® AS-40 (or BIO-TERGE® AS-40 HA) 23.30
AMMONYX® MO 5.00
NINOL® 96-SL 3.50
AMPHOSOL® CA 1.00
Merquat 550 (ONDEO Nalco) Polyquaternium-7 0.25

--- Phase 2 ---
Citric Acid
Fragrance, Dye, & Preservative
Sodium Chloride

**Total**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized Water</td>
<td>q.s. to 100.0</td>
</tr>
<tr>
<td>BIO-TERGE® AS-40 (or BIO-TERGE® AS-40 HA)</td>
<td>23.30</td>
</tr>
<tr>
<td>AMMONYX® MO</td>
<td>5.00</td>
</tr>
<tr>
<td>NINOL® 96-SL</td>
<td>3.50</td>
</tr>
<tr>
<td>AMPHOSOL® CA</td>
<td>1.00</td>
</tr>
<tr>
<td>Merquat 550 (ONDEO Nalco) Polyquaternium-7</td>
<td>0.25</td>
</tr>
<tr>
<td>Citric Acid</td>
<td>q.s.</td>
</tr>
<tr>
<td>Fragrance, Dye, &amp; Preservative</td>
<td>q.s.</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>q.s.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Procedure**

1. Add ingredients of Phase I, heat to 60ºC, blend until homogeneous.
2. Adjust pH to 6.0-7.0 with Citric Acid.
3. Add Fragrance, Dye, and Preservative, if desired.
4. Adjust to desired viscosity with Sodium Chloride.

*Note: When formulating with BIO-TERGE® AS-40 HA, a greater amount of Citric Acid may be needed to adjust the pH within the recommended range as noted, than when formulating with BIO-TERGE® AS-40.*

**Physical Properties**

- **Appearance**: Clear yellow liquid
- **pH**: 6.0-7.0

**Viscosity Profile, cps:**
- as is: 1,000
- 0.5% sodium chloride: 13,300
- 1.0% sodium chloride: 25,300

**Storage/Stability**

- Freeze thaw: Stable
- Elevated heat: Stable

**External Comment**

Marketing Notes: AMPHOSOL® HCA-HP may be a potential substitute for AMPHOSOL® CA. It should be noted that stability testing using this AMPHOSOL® HCA-HP has not been completed on this formulation, and in addition to the pH adjustment taking a greater amount of Citric Acid, the substitution may also yield slightly different physical properties.

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- BIO-TERGE®
- AMMONYX®
- AMPHOSOL®
- NINOL®
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