APPLICATION GUIDE

Formulations to inspire and enhance your product range
THE FORMULATIONS FEATURED IN THIS GUIDE HAVE BEEN PRODUCED BY STEPHENSON PERSONAL CARE’S TECHNICAL INNOVATIONS CHEMISTS, USING OUR RANGE OF LIQUID SOAP BASES WHICH CAN BE USED AS NATURAL ALTERNATIVES TO SYNTHETIC SURFACTANTS, OR BLENDED WITH NATURAL SURFACTANTS FOR ADDED FLEXIBILITY AND PERFORMANCE.

What is Liquid Soap?

Liquid Soap is produced from the reaction between oils, such as vegetable oil, and Potassium Hydroxide (KOH), which is an alkaline base. Oils are an extremely important component of the soap making process, and without oil (or fatty acids of oils) the saponification reaction cannot take place. Although Potassium Hydroxide is highly caustic, the chemical process of saponification completely removes this chemical – resulting in a final, natural mixture of water, soap and glycerin. Requiring little more than the addition of colour, fragrance, and thickening; it is easy to incorporate Stephenson’s liquid soap base into your formulations to produce a variety of fantastic, natural finished products.
WHY CHOOSE LIQUID SOAP?

- **NATURAL**
  - High natural oil content with moisturising skin feel

- **CLEANSING**
  - Exceptional foam ability and longevity

- **HIGH PH**
  - No need for additional preservation system; high PH also has a softening effect on hair

- **MULTI-FUNCTIONAL**
  - Expand your product range using just one liquid soap base

- **CLEAN LABEL**
  - Composed of a single surfactant – supports ‘clean labelling’

- **CERTIFIABLE**
  - Can be certified organic + RSPO sustainable

- **SOLUBILISES**
  - For adding essential oils – no need for additional solubilisers

- **REDUCE COSTS**
  - Liquid soap makes up to 100% of end product – less raw material inventory
SYNTHETIC SURFACTANTS

ADVANTAGES

✓ Inexpensive
✓ Versatile
✓ Good detergent & foaming performance

DISADVANTAGES

× Often composed of many substances
× Often contains Petroleum derivatives
× Irritating to skin/scalp
× No Certifiable Organic or RSPO SG approved options
× Multiple processing steps may increase trace elements in finished product
A KEY BENEFIT OF LIQUID SOAP IS **CERTIFICATION STATUS**; WHICH IS A VERY POWERFUL TOOL IN BUILDING TRUST WITH CONSUMERS. FOR ORGANIC PRODUCTS, IT BUILDS CONFIDENCE THAT THE PRODUCTS THEY BUY CONTAIN MATERIALS THAT ARE ORGANICALLY PRODUCED AND HAVE NOT BEEN SUBJECT TO ANY UNSUITABLE PROCESSING. **LIQUID CASTILE SOAP**, BEING NATURALLY DERIVED FROM VEGETABLE OILS, CAN BE USED TO ACHIEVE A **CERTIFIED ORGANIC PRODUCT RANGE**, OR TO ACHIEVE A SPECIFIC LEVEL OF ORGANIC CONTENT.

For brands looking to achieve RSPO Certified Status, it is difficult to find synthetic surfactants that have any more than Mass Balance certification. For brands to achieve higher level RSPO status, they should consider liquid soaps, which can derive from Certified Segregated Palm Oil and Palm Kernel Oil.

With our COSMOS, NOP and RSPO Certified Liquid Soap Bases, you are able to create a variety of finished products; offering specific value to companies looking to make sustainable, natural or ‘Made with Organic’ ingredients claims on your product range.
LIQUID SOAP PRODUCT RANGE

LIQUID SOAP 100/101
- 45% Active Liquid Soap Concentrate
- High foaming
- Made with Organic Coconut & Olive Oils

LIQUID SOAP 105
- Natural Liquid Soap Base made with organic oils
- No need to dilute
- Thickens with salt
- Made with Organic Coconut & Sunflower Oils

LIQUID SOAP PK SG
- 45% Active Liquid Soap Concentrate
- High foaming
- 100% RSPO Certified Segregated Sustainable Palm Kernel Oil
EXAMPLE PRODUCT CONCEPTS USING LIQUID SOAP AS THE ONLY
SURFACTANT, TO CREATE SIMPLE & NATURALLY DERIVED
FINISHED PRODUCTS THAT CAN BE CERTIFIED ORGANIC.
NATURAL BEARD WASH

FOR A NATURAL BEARD WASH, YOU CAN USE LIQUID SOAP 105, MADE WITH SAPONIFIED ORGANIC COCONUT OIL.

Coconut Oil is a powerful, fast-absorbing moisturiser, high in Vitamin E, and acts as an antioxidant with anti-ageing, antiviral and antifungal benefits, known for protecting skin cells from damage and restoring dry, flaking skin.
NATURAL HAND WASH

TO MAKE AN NATURAL LIQUID HAND WASH, YOU CAN USE LIQUID SOAP PK-SG.

Formulated with saponified RSPO Certified Segregated Sustainable Palm Kernel Oil. Idea for differentiating your products with a natural and sustainability claim.

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>INCI</th>
<th>FUNCTION</th>
<th>PHASE</th>
<th>% W/W</th>
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<td>Aqua (and) Potassium Palm Kernelate (and) Glycerin (and)</td>
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<td></td>
<td>Potassium Citrate (and) Citric Acid</td>
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<td>Humectant</td>
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<td>Citrus Aurantifolia Leaf Oil</td>
<td>Fragrance</td>
<td>C</td>
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TO MAKE A NATURAL FACE WASH, WE RECOMMEND USING OUR **LIQUID SOAP 105** (LIQUID CASTILE SOAP). MADE WITH ORGANIC SUNFLOWER AND COCONUT OILS.

Sunflower Oil is rich in linoleic fatty acid (Omega 6), which offers good skin absorption, maintains the skin’s natural barrier, and has anti-inflammatory properties.

### INGREDIENTS

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<td>Sodium Chloride</td>
<td>Viscosity Modifier</td>
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> Natural
> Clean rinse-off and pleasant after feel
> Superior moisturisation
> PEG-free
> Sulfate free
> Preservative free
> High in Vitamin E
TO MAKE AN NATURAL SURFACE CLEANER, WE RECOMMEND USING OUR LIQUID SOAP 105 (LIQUID CASTILE SOAP). MADE WITH ORGANIC SUNFLOWER AND COCONUT OILS.

> Natural
> Effective cleaning
> PEG-free
> Sulfate free
> Preservative free
LIQUID SOAP + NATURAL SURFACTANT
PRODUCT CONCEPTS

EXAMPLE PRODUCT CONCEPTS USING A BLEND OF LIQUID SOAPS AND NATURAL SURFACTANTS FOR ADDED FLEXIBILITY & PERFORMANCE:
BEARD WASH

For a natural beard wash, you can use our Bodywash base. Made with liquid soap, derived from a blend of saponified organic coconut and sunflower oils with gentle surfactants and skin enhancing ingredients.

Coconut Oil is a powerful, fast-absorbing moisturiser, high in Vitamin E, and acts as an antioxidant with anti-ageing, antiviral and antifungal benefits, known for protecting skin cells from damage and restoring dry, flaking skin.

- Natural
- Clean rinse-off and pleasant after feel
- PEG-free
- Sulfate free
- Preservative free
- High in Vitamin E
- Made with Organic Coconut & Sunflower Oils
Liquid Soap 105 (Liquid Castile Soap), is a natural Liquid Soap Base made with organic Coconut and Sunflower oils. There is no need to dilute, and it easily thickens with salt due to the high Sunflower Oil content. Below, we have outlined some example product applications using Liquid Soap 105 as your soap base, blended with natural surfactants.

**MAKE-UP BRUSH CLEANSER**

**Suggested ingredients:**
- Liquid Soap 105
- Sodium Methyl Oleoyl Taurate

**SHOWER JELLY**

**Suggested ingredients:**
- Liquid Soap 105
- Cocomidopropyl Betaine

**SHOWER GEL**

**Suggested ingredients:**
- Liquid Soap 105
- Cocomidopropyl Betaine

**HARD SURFACE CLEANER**

**Suggested ingredients:**
- Liquid Soap 105
- Decyl Glucoside

**STAIN REMOVER**

**Suggested ingredients:**
- Liquid Soap 105
- Alkaline Protease
  (Enzyme/ Stain removal)
Liquid Soap 100/101, is a natural Liquid Soap Base made with organic Coconut and Olive oils. It is a 45% active Liquid Soap Concentrate with high foaming ability. Below, we have outlined some example product applications using Liquid Soap 100/101 as your soap base, blended with natural surfactants.

**EXFOLIATING FACIAL SCRUB**

**Suggested ingredients:**
- Liquid Soap 100
- Sodium Lauryl Glycinate

**MOISTURISING SHAVE GEL**

**Suggested ingredients:**
- Liquid Soap 100
- Sodium Lauryl Methyl Isethionate / Cocamidopropyl Betaine

**DISH SOAP**

**Suggested ingredients:**
- Liquid Soap 101
- Lauryl Betaine

(Can be certified ‘Made With Organic’ through COSMOS)
LIQUID SOAP
PK-SG

Liquid Soap PK-SG, is a 45% active Liquid Soap Concentrate, made with 100% RSPO Certified Segregated Sustainable Palm Kernel Oil – ideal for brands looking to differentiate with sustainability claims. Below, we have outlined some example product applications using Liquid Soap PK-SG as your soap base, blended with natural surfactants.

**KITCHEN & BATHROOM CLEANER**

**TOILET CLEANER**

*Suggested ingredients:*

- Liquid Soap PK-SG
- Cocomidopropyl Betaine