

FORMULATION

# 1,4-Dioxane Free Laundry Detergent

## Overview

- Formulated without ethoxylated surfactant to eliminate the presence of 1,4-Dioxane
- Soltellus™ 2101S boosts enzymes and functions as a sequestrant and dispersant
- Made with biodegradable ingredients

## Composition

	Trade Name	INCI	% w/w	Function	
A		Water	q.s. to 100		
		Sodium citrate	3	Biodegradable chelant	
		<b>Soltellus 2101S (Lygos)</b>	<b>Sodium polyaspartate</b>	<b>1</b>	<b>Biodegradable dispersant, sequestrant, enzyme booster</b>
		Milcoside 303 (LG household)	Decyl glucoside (50% active)	12	Biodegradable nonionic surfactant
			Sodium oleate	0.75	Biodegradable anti-foamer
		Stepanol WA-Extra HP (Stepan)	Sodium Lauryl Sulfate (30% active)	13.5	Biodegradable anionic surfactant
B		NaOH or Citric acid		pH adjuster	
		NaCl		Viscosity modifier	
C	Liquinase Evity 3.5 L (Novonosis)	Protease	0.8	Stain removal	
	Amplify Prime 100 L (Novonosis)	Amylase	0.13	Stain removal	
	Mannaway 200 L (Novonosis)	Mannanase	0.02	Stain removal	
	Acticide MBS (Thor)	Methylisothiazolinone/ Benzisothiazolinone	0.5	Biodegradable preservative	

## Procedure

Add ingredients in the order listed, mixing until fully dissolved after each addition. Dissolve each ingredient completely before adding the next one. Adjust pH to 8 with NaOH. Adjust viscosity using NaCl. Always add enzymes and the preservative when the mixture has cooled down (if you are using temperature in your process).

## Technical Specifications

Parameter	Value
Appearance (25°C)	Clear Liquid
pH (as is)	7.8-8.2
Viscosity (cPs)	210-280
Stability (1 Month, 40°C)	Stable
Dose	45 ml

## Performance (Stain removal)

Suggested method: ASTM D4265-14, using CFT SM-04 as the stain set

