

## Oral Care Formulations

### Balance Transparent Gel Toothpaste

Formula# M300-3010F

Material# 878353

A gel toothpaste with capsules containing green tea flavor.

Ingredients (Trade Name)	INCI Name	% w/w	Supplier
<b>Phase A</b>			
Sorbitol 70% solution	Sorbitol	66.00	Solvo Chem
Distilled Water	Water/Aqua	QS to 100	In-House
<b>Phase B</b>			
Sodium Saccharin	Sodium Saccharin	0.3	Merck
FD&C Blue 1	CI 42090	0.000096	BASF
FD&C Yellow 5	CI 19140	0.000064	BASF
<b>Phase C</b>			
<b>Blanose™ 7M8SF Sodium Carboxymethylcellulose (CMC)</b>	<b>Cellulose Gum</b>	<b>0.90</b>	<b>Ashland</b>
Polyethylene Glycol (PEG) 400	PEG 400	2.00	Merck
<b>Phase D</b>			
Zeodent* 113	Silica	9.00	Huber
Zeodent* 165	Silica	9.00	Huber
<b>Phase E</b>			
Sodium Lauryl Sulfate	Sodium Lauryl Sulfate	2.00	Merck
<b>Phase F</b>			
Peppermint Flavor STU1503520	Flavor	1.20	Takasago
<b>Phase G</b>			
<b>Captivates™ HC 6325 encapsulates</b>	<b>Aqua/Water [and] Caprylic/Capric Triglycerides [and] Flavor [and] Gelatin [and] Acacia Senegal Gum [and] Potassium Sorbate [and] CI 74260 [and] Xanthan Gum</b>	<b>1.00</b>	<b>Ashland</b>
<b>Total</b>		<b>100.00</b>	

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### Lab processing procedure

1. Add water and sorbitol to the mixer.
2. Add Phase B and mix for 10 minutes at 600 rpm.
3. Disperse 7M8SF CMC into PEG-400 and add it slowly to above premix under agitation. Mix it for 15 minutes at 800 rpm.
4. Transfer the premix to Ross mixer.
5. To the premix, add silica and mix briefly with no vacuum until the particles are wetted out. Then mix for 15 to 20 minutes at 80 rpm, under vacuum.
6. Add the sodium lauryl sulfate and mix for 5 minutes at 10 rpm, with no vacuum. Mix for additional 5 minutes at 10 rpm under vacuum.
7. Add the flavor and mix for 10 minutes at 10 rpm, under vacuum.
8. Add Captivates™ HC 6325 encapsulates and mix for 2 minutes at 10 rpm, under vacuum.

### Typical Properties

<b>Appearance:</b>	Light green transparent gel with green capsules
<b>pH:</b>	6.5 – 6.8
<b>Viscosity:</b>	175,000 – 200,000 cP (Brookfield RVT/Helipath Spindle F/20 RPM/1 minute/25°C)

**This formula has passed 3-months accelerated stability test and a 28-day preservative efficacy test. However, the preservative system and flavor have not been optimized.**

\*Third party trademark

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