

Zemea® Propanediol is a 100% plant-based alternative to petroleum-based glycols and glycerins that helps formulators create cleaner labels without sacrificing performance. When used in semi-permanent hair color formulations, Zemea® Propanediol enables:

- Superior application & coverage
- Richer, longer-lasting color
- · Enhanced wash fastness
- · Better sensory experience

Discover how Zemea® Propanediol can help you create vibrant, sustainable, and completely uncompromising hair color formulations at primientcovation.com/zemea.

Application & Color

Zemea[®] Propanediol, especially when paired with SharoSENSE™, spread smoothly, coated evenly, and delivered deeper, more vibrant tones compared to Covafix 123 and the control.

Ingredient tradename	Function	25961	25954	25960	25970
	Formulation	Control	EXP-1	EXP-2	EXP-3
DI Water	Solvent	72.33	72.33	72.33	71.33
Incroquat Behenyl TMS-50- MBAL-PA	Emulsifier	6.00	6.00	6.00	6.00
Cetearyl Alcohol	Emulsifier	5.00	5.00	5.00	5.00
Caprylic/Capric triglyceride	Emollient	2.00	2.00	2.00	2.00
Glypure 70	pH adjustment	0.40	0.40	0.40	0.40
Arianor® Jade Blue	Color	0.07	0.07	0.07	0.07
Arianor® Staw Yellow	Color	0.20	0.20	0.20	0.20
Covafix 123	Fixative	-	3.00	-	-
Zemea® Propanediol	Fixative	-	-	3.00	3.00
SharoSENSE™ Plus 181-N	Fixative	-	-	-	1.00
DI Water	Solvent	13.00	10.00	10.00	10.00
Isopropyl Alcohol	Solvent	1.00	1.00	1.00	1.00
Glypure 70	pH adjustment	q.s.	q.s.	q.s.	q.s.
Total		100.00	100.00	100.00	100.00

Covafix 123:

Contains PG, benzyl alcohol, Polyquat-80

SharoSENSE™ Plus 181-N: Contains Maltol and Polyquat-80

Analysis

- · Ease of application
- Evenness of color
- Color saturation
- Washfastness
- Shine/gloss
- Hair feel

Reminder: Fixative - helps a hair dye bond with the hair and enhance longevity.

Performance testing

Sensient Arianor® case study

Wash fastness

- Covafix 123 sample showed the most noticeable fading and increased patchiness after just one wash.
- Zemea® propanediol and the control samples exhibited minimal fading, maintaining most of their original color intensity.
- Zemea®/SharoSense™ formulation demonstrated the greatest resistance to fading, preserving nearly all of its initial color, which indicates its suitability for long-lasting color applications.

Shine & Gloss

- There were no significant differences among the four samples in terms of shine/gloss or the hair's after-feel.
- All swatches displayed similar levels of gloss, suggesting little impact on the hair's natural shine.

Feel

Additionally, the texture of the hair strands remained consistent across all formulations.



Wash samples, Before and After Single Wash.

