

Purple and Blue Shampoo: Chemistry + Function

WHAT IS PURPLE / BLUE SHAMPOO?

Purple and blue shampoos are **color-correcting cleansing systems** designed to neutralize unwanted warm tones in the hair.

- **Purple shampoo** → neutralizes yellow
- **Blue shampoo** → neutralizes orange

They work through temporary pigment deposition on the hair surface.

COLOR THEORY (FOUNDATION)

- Purple sits opposite yellow on the color wheel
- Blue sits opposite orange

When applied to hair, these colors:

- Cancel out brassiness
- Create a cooler, brighter tone

THE CHEMISTRY: HOW IT WORKS

1. Type of Dye Used

- Direct dyes (semi-permanent)
- Typically:
 - Violet No. 2

Key properties:

- Cationic (positively charged)
- Water-soluble

2. Hair Fiber Chemistry

Hair (keratin) has:

- A slightly negative charge
- More negative charge when:
 - Bleached
 - Damaged
 - Porous

This creates attraction between:

- **Hair (negative)**
- **Dye (positive)**

3. Deposition Mechanism

During use:

1. Hair becomes hydrated
2. Cuticle slightly opens
3. Dye molecules attach to surface
4. A thin pigment layer remains after rinsing

This is:

- **Electrostatic attraction**
- **Surface adsorption (not permanent color)**

ROLE OF SURFACTANTS

Shampoo must balance:

- Cleansing
- Pigment retention

Ideal system:

- Mild surfactants:
 - Decyl Glucoside
 - Cocamidopropyl Hydroxysultaine
 - Sodium Lauroyl Sarcosinate

Prevents:

- Over-stripping
- Rapid pigment loss

ROLE OF CONDITIONING AGENTS

Examples:

- Polyquaternium-7
- Guar Hydroxypropyltrimonium Chloride

Function:

- Deposit onto hair
- Form a light film
- Help anchor pigment

Improves:

- Tone longevity
- Slip and feel
- Even distribution

POROSITY = KEY FACTOR

Low Porosity Hair:

- Less dye uptake
- More subtle toning

High Porosity Hair:

- More dye uptake
- Stronger toning effect
- Higher risk of over-toning

Common in:

- Bleached hair
- Gray hair
- Chemically treated hair

WHY TONING IS TEMPORARY

The bond between dye and hair is:

- Physical (not chemical)

Removed by:

- Shampooing
- Water exposure
- Friction

pH CONSIDERATIONS

Ideal pH: 5.0 – 5.5

Benefits:

- Smooths cuticle
- Improves even deposition
- Enhances hair feel

WHAT IS ACTUALLY HAPPENING?

When using purple/blue shampoo:

1. Hair is cleansed
2. Cuticle slightly swells
3. Dye adheres to surface
4. Hair reflects cooler tones

Result:

- Brassiness is visually neutralized

FORMIULATOR KEY NOTES

Purple and blue shampoos:

- Do NOT permanently color hair
- Do NOT change melanin
- Provide temporary optical correction

A toning shampoo is simply:

A well-balanced shampoo base + controlled dye addition

This allows you to:

- Create multiple toning strengths
- Customize for different hair types
- Expand into a full product line

LEARN PROFESSIONAL HAIR FORMULATION

To master:

- Shampoo systems for all hair types
- Conditioning chemistry
- Toning and treatment products
- Creating a complete sellable line

Start Today

[Professional Natural Hair Care Formulation Course](#)