



Natural Skincare Formulation for Healing

Chapter 3: Week 3 – Cleansing & Toner Formulation for Healing

A comprehensive guide to creating gentle, effective products for damaged and sensitive skin

Chapter Agenda

1

Gentle Cleansing Science

Understanding the fundamentals of gentle cleansing, surfactants, pH balance, and healing ingredients for damaged skin

2

Healing Toner Formulation

Exploring hydrosols, alcohol-free formulations, preservation techniques, and humectants for barrier repair

3

Cleanser & Toner Recipes

Practical, beginner-friendly recipes for different skin types and conditions, with customization options

By the end of this chapter, you'll understand the science behind effective cleansing and toning for compromised skin and be able to create your own healing formulations.

Why Traditional Cleansers Can Damage Skin

Many commercial cleansers contain harsh ingredients that can:

- Strip away natural oils and proteins essential for barrier function
- Disrupt the skin's acid mantle (protective layer)
- Create micro-tears in already compromised skin
- Trigger inflammation and sensitivity responses
- Lead to rebound oil production and dehydration

Gentle cleansing is the foundation of skin healing and should focus on removing impurities while preserving skin integrity.



Damaged skin barrier after using harsh cleansers with sulfates and high pH

Understanding Gentle Surfactants

What Are Surfactants?

Surface active agents that lower surface tension between oil and water, allowing removal of dirt and oil. They contain hydrophilic (water-loving) and lipophilic (oil-loving) parts.

Harsh vs. Gentle

- Harsh: SLS, SLES
- Gentle: Coco-glucoside, decyl glucoside, betaines

Gentle surfactants have larger molecular structures that don't penetrate and disrupt skin barrier.

Selecting for Damaged Skin

Choose surfactants with:

- Low irritation potential
- Biodegradable properties
- Plant-derived origins
- Higher fatty acid content

For damaged skin, consider using surfactants at 3-8% concentration (lower than typical commercial formulations).

The Critical Role of pH in Skincare

The Acid Mantle

The skin's acid mantle is a slightly acidic film (pH 4.5-5.5) that:

- Acts as a protective barrier against bacteria and environmental damage
- Maintains skin flora balance
- Supports enzyme activity for natural exfoliation
- Prevents transepidermal water loss (TEWL)

Damaged skin often has a disrupted pH, typically more alkaline than healthy skin.



Optimal pH Ranges for Damaged Skin:

- Cleansers: pH 4.5-5.5
- Toners: pH 4.0-5.0
- Treatments: pH 3.5-4.5

Always test your formulations with pH strips or a digital pH meter!

Oil-Based vs. Water-Based Cleansers

Oil-Based Cleansers

Pros:

- Exceptional for removing makeup and sunscreen
- Non-stripping and moisturizing
- Can incorporate healing oils (calendula, sea buckthorn)

Best for: Dry, dehydrated, or severely compromised skin

Water-Based Cleansers

Pros:

- Refreshing feel and better rinsability
- Can incorporate water-soluble actives
- Customizable foaming properties

Best for: Combination to oily skin that still needs healing

Hybrid Formulations

Examples:

- Oil-to-milk cleansers
- Balm cleansers with emulsifiers
- Cream cleansers with minimal surfactants

Best for: Universal use, especially for damaged skin in recovery



Healing Actives for Cleansers



Chamomile Extract

Rich in bisabolol and chamazulene, offers potent anti-inflammatory properties, reducing redness and irritation. Use at 1-3% in formulations.



Aloe Vera

Contains polysaccharides that boost hydration and accelerate wound healing. Acts as an anti-inflammatory and cooling agent. Use at 10-30%.



Raw Honey

Natural humectant with antimicrobial properties. Particularly beneficial for acne-prone yet sensitive skin. Use at 5-15% in rinse-off products.



Calendula Oil

Contains flavonoids that promote tissue regeneration and reduce inflammation. Excellent for eczema-prone skin. Use at 3-10% in oil phase.



Colloidal Oatmeal

Contains avenanthramides that reduce itching and inflammation. Creates a protective film on damaged skin. Use at 1-5% in formulations.



Panthenol (Vitamin B5)

Penetrates deeply to hydrate and support skin barrier repair. Reduces inflammation and itching. Use at 1-5% in water phase.

Quiz: Test Your Cleansing Knowledge

Which surfactants are ideal for sensitive skin?

- A. Sodium Lauryl Sulfate
- B. Coco-glucoside and Decyl glucoside
- C. Ammonium Laureth Sulfate
- D. Sodium Laureth Sulfate

Answer: B. Coco-glucoside and Decyl glucoside are gentle, plant-derived surfactants ideal for compromised skin.

What is the ideal pH range for cleansers used on damaged skin?

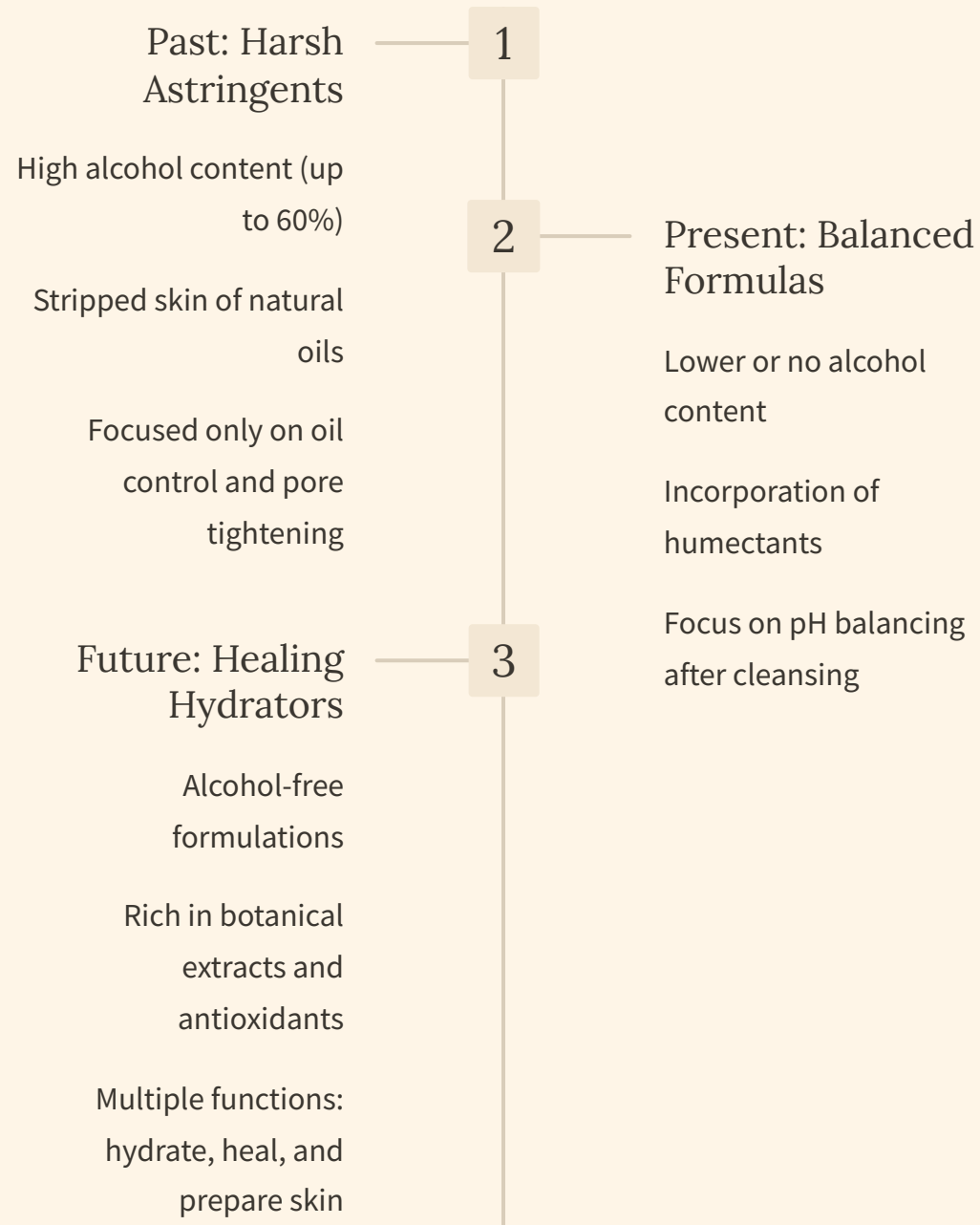
- A. 7.0-8.0 (neutral to slightly alkaline)
- B. 2.0-3.0 (highly acidic)
- C. 4.5-5.5 (slightly acidic)
- D. 8.0-9.0 (alkaline)

Answer: C. 4.5-5.5 matches the skin's natural acid mantle and supports barrier repair.



Rethinking Toners: From Astringents to Healers

The Evolution of Toners



Modern Toner Benefits for Damaged Skin:

- Restores pH balance after cleansing
- Delivers water-soluble active ingredients
- Provides instant hydration to compromised barrier
- Reduces inflammation with botanical extracts
- Prepares skin to better absorb subsequent products

Hydrosols & Extracts: The Heart of Healing Toners



Rosewater

Anti-inflammatory and soothing for redness. Contains natural tannins that gently tone without drying. Rich in antioxidants to protect damaged skin.

Use at: 30-80% of formulation

These botanical waters are created through steam distillation of plant materials, preserving delicate compounds that would be destroyed by other extraction methods.



Chamomile Hydrosol

Exceptional calming properties for irritated skin. Reduces histamine response and inflammation. Safe for even the most sensitive skin conditions.

Use at: 20-70% of formulation



Cucumber Extract

Cooling and hydrating for inflamed skin. Contains silica and antioxidants that strengthen skin barrier. Provides gentle astringent properties.

Use at: 3-10% of formulation

Formulating Safe, Effective Healing Toners



Base

70-85% hydrosols and/or distilled water

Select bases that complement your target skin condition (e.g., rosewater for redness)



Actives

5-15% botanical extracts

Consider glycerin-based extracts for added humectant properties

Layer multiple extracts for synergistic effects



Humectants

3-10% total humectants (glycerin, sodium PCA, hyaluronic acid)

Critical for rehydrating damaged skin barrier

Balance multiple types for immediate and long-term hydration




Preservatives

0.5-1.5% natural-compatible preservatives

Essential for all water-based formulations

Select gentle options like Leucidal or Geogard Ultra

 **Safety First:** All water-based formulations (including toners) **MUST** include a broad-spectrum preservative system to prevent harmful microbial growth. Unpreserved water-based products can develop dangerous bacteria within days, even when refrigerated.



Beginner-Friendly Healing Recipes

Honey-Chamomile Cleansing Balm

Ideal for extremely sensitive, dry skin

- 30g Shea butter
- 20g Coconut oil
- 15g Calendula-infused oil
- 15g Raw honey
- 10g Emulsifying wax
- 5g Chamomile essential oil (0.5%)
- 5g Vitamin E oil

Melt oils, butter, and wax. Cool slightly, then blend in honey and essential oil. Pour into sterilized jar and allow to set.

Soothing Anti-Inflammatory Toner

For all damaged skin types

- 40g Rose hydrosol
- 30g Chamomile hydrosol
- 15g Aloe vera gel (preservative-free)
- 5g Panthenol (Vitamin B5)
- 5g Glycerin
- 3g Green tea extract
- 1.5g Leucidal Liquid (preservative)
- 0.5g Licorice root extract

Mix all ingredients in a sterilized container. Adjust pH to 4.5-5.0 with lactic acid if needed. Transfer to sterilized spray bottle.

Your Healing Skincare Journey

Key Takeaways

- Gentle cleansing is fundamental to skin healing and recovery
- pH balance (4.5-5.5) is essential for maintaining skin barrier health
- Healing toners hydrate and deliver actives rather than strip the skin
- Natural ingredients can be effective when properly formulated and preserved
- Customization allows you to address specific skin healing needs

Reflection & Activity

Reflect: Which recipe are you most excited to try? What would you add or change to address your specific skin concerns?

Activity: Choose one cleanser and one toner recipe, make them, and document the results in your formulation journal. Note appearance, texture, scent, and skin feel.

Share: Post your creations in our student community forum for feedback!

"Clean skin is not stripped skin. It is soothed, supported, and loved."