

Advanced Skin Care Techniques

Advanced Skin Care Techniques – Study Notes

1. Foundations of Modern Skin Care

Concept	Key Points	Practical Implication
Skin barrier (stratum corneum)	• Lipid matrix (ceramides, cholesterol, free fatty acids) • “Brick and mortar” structure • pH 4.5–5.5	Protects against transepidermal water loss (TEWL) and irritants. Formulations must be pH balanced and lipid supportive.
Skin types & conditions	• Normal, oily, dry, combination, sensitive, acne-prone, hyperpigmented, aging	Tailor actives, vehicle viscosity, and frequency of application.
Skin care hierarchy	1. Cleansing – remove debris without stripping lipids 2. Targeted treatment – serums, actives 3. Moisturizing – restore barrier 4. Sun protection – prevent photodamage	Each step builds on the previous; skipping a layer compromises efficacy.

2. High-Performance Cleansing

Technique	Mechanism	When to Use	Formulation Tips
Micellar water (non-ionic surfactants)	Forms micelles that encapsulate oil & dirt	Morning, light makeup removal	Keep surfactant concentration 10% to avoid irritation.
Low-pH gel cleansers (pH 4.5–5.5)	Preserve acid mantle, mild exfoliation	Sensitive or barrier-impaired skin	Use amphoteric surfactants (e.g., cocamidopropyl betaine) with humectants (glycerin).

Advanced Skin Care Techniques

Technique	Mechanism	When to Use	Formulation Tips
Enzyme-based exfoliating cleansers	Proteolytic enzymes (papain, bromelain) cleave dead cell proteins	Weekly or bi-weekly for dull skin	Combine with mild surfactants; keep enzyme activity <0.5% to limit over-exfoliation.
Oil-based cleansers (double cleansing)	Lipophilic oils dissolve makeup & sebum	Evening, heavy makeup or sunscreen	Choose non-comedogenic oils (squalane, jojoba) and add antioxidants (vitamin E).

3. Targeted Actives & Delivery Systems

3.1. Retinoids & Retinoic Acid Derivatives

Form	Potency	Typical Concentration	Delivery Enhancements
Retinol	Moderate (requires conversion)	0.25–1%	Encapsulation in liposomes or micro-emulsions to improve stability.
Hydroxypinacolone Retinoate (HPR)	Direct-acting, less irritation	0.05–0.1%	Use with silicone-based carriers for even spread.
Tretinoin (all-trans retinoic acid)	High (prescription)	0.025–0.1%	Nanoparticle carriers reduce irritation and enhance penetration.

Best practice: Start with 2–3 times/week, gradually increase to nightly; pair with barrier-supporting moisturizers (ceramides, niacinamide).

3.2. Vitamin C (Ascorbic Acid & Derivatives)

| Variant | Stability | Typical pH | Typical % | Synergy | |-----|-----|-----|