

Evidence-Backed Ingredient Cheat Sheet

*Ingredients with genuine clinical support, what each does,
and the concentrations the evidence shows matter.*

How to Read This Sheet

Each ingredient below has been validated in peer-reviewed clinical trials for the listed function in adults 40+. "Effective range" is the minimum concentration shown to produce measurable outcomes. Below that range, benefits may be minimal. Above it, irritation risk rises without proportionally better results.

Ingredient	Effective Range	What the Evidence Shows
RETINOIDS		
Tretinoin (Retin-A)	0.025-0.05%	Gold standard for collagen remodeling and cell turnover. Requires prescription in most countries. Apply at night, start low.
Retinol (OTC)	0.3-1%	Converts to retinoic acid in skin. Slower and gentler than tretinoin. Use only in opaque, airtight pump packaging.
Retinal (Retinaldehyde)	0.05-0.1%	One conversion step from retinoic acid. More potent than retinol, lower irritation than tretinoin. Emerging option.
VITAMIN C		
L-Ascorbic acid	10-20%	Antioxidant, collagen synthesis, brightening. pH must be below 3.5 to penetrate. Unstable - use dark airtight packaging.
Ascorbyl Glucoside	2%	Stable vitamin C derivative. Lower potency but longer shelf life. Good for sensitive or reactive skin.
BARRIER SUPPORT		
Ceramides (1, 3, 6-II)	All three types	Restore lipid bilayer. Critical for skin 50+ where natural ceramide production declines ~30%. Look for all three types.
Niacinamide	4-10%	Reduces water loss, evens skin tone, anti-inflammatory. Well-tolerated even at 10%. Good for most skin types.
PEPTIDES		
Matrixyl 3000	In first half of list	Strongest peptide evidence base for wrinkle reduction. Multiple independent trials. Product should list it early.
Argireline	5-10%	Modest evidence for expression lines at adequate concentration. Limited benefit below 5%.
HYDRATION		
Hyaluronic acid	0.1-2%	Holds up to 1000x its weight in water. Most effective in multiple molecular weights. Apply to damp skin.
Glycerin	5-10%	Humectant with strong evidence base. Inexpensive and stable. Boosts HA performance when combined.

EXFOLIANTS

Glycolic acid	5-10% OTC	Loosens desmosomes, accelerates cell turnover. Evidence for fine lines, texture, and tone. Build frequency gradually.
Lactic acid	5-12%	AHA with larger molecule = less irritating than glycolic. Also a mild humectant. Good entry-point exfoliant.
Azelaic acid	10-20%	Anti-inflammatory, hyperpigmentation, rosacea. 20% is prescription-strength; 10% OTC effective for most concerns.

SUNSCREEN (Essential)

Broad-spectrum SPF 30+	Daily, reapply	Highest-evidence intervention for slowing visible skin aging. UVA + UVB protection required. Non-negotiable.
Zinc oxide / Titanium dioxide	Physical filters	Stable, well-tolerated, broad coverage. Best for sensitive, post-procedure, or barrier-compromised skin.

