

# Actives

PRODUCT DOSSIER

## VitaKap<sup>®</sup> RetinoKap-50P

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VERSION 1.01

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## PRODUCT DATA SHEET (TDS)

### VitaKap®

## RETINOKAP-50P

*For Advanced Skin Renewal & Dermal Revitalization*

### 1. Description

RetinoKap-50P is a high-performance stabilized retinol concentrate containing 50% active retinol, designed for advanced cosmetic formulations. Protected with a synergistic antioxidant system and optimized for enhanced stability, it offers excellent formulation compatibility, helping deliver the proven anti-aging benefits of retinol while supporting product shelf life and performance.

Scientific studies have shown that retinol enhances collagen production in the skin, stimulates keratinocyte proliferation, increases epidermal thickness, and inhibits tyrosinase activity. As a result, it delivers visible improvements in skin appearance, including the reduction of fine lines and wrinkles, increased firmness, improved skin tone and smoothness, and a more even complexion with reduced dark spots and age spots.

### 2. How It Works

#### 2.1 Cellular Uptake and Conversion

- Retinol enters skin cells by diffusion and is metabolized into retinoic acid (RA), its biologically active form. Excess retinol is stored as retinyl esters or degraded into inactive metabolites.

#### 2.2 Intracellular Transport and Receptor Binding

- Retinoic acid binds to CRABP-2 (Cellular Retinoic Acid-Binding Protein 2), which transports it from the cytoplasm to the nucleus. In the nucleus, RA binds to Retinoic Acid Receptors (RARs) that form complexes with Retinoid X Receptors (RXRs).

#### 2.3 Gene Activation and Biological Response

- The RAR/RXR complex binds to Retinoic Acid Response Elements (RAREs) on DNA, regulating the expression of genes involved in collagen production, elastin synthesis, glycosaminoglycan formation, cell proliferation, and skin renewal, resulting in visible anti-aging benefits.

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### 3. Recommended Use Levels

INGREDIENT	CONCENTRATION
RETINOKAP-50P	0.1-0.2%

### 4. Pharmaceutical Characterization

PARAMETER	SPECIFICATION
ACTIVE COMPOSITION	Vitamin A
SOLUBILITY	Soluble in oils and organic solvents
STABILITY	pH 5.0 – 6.5
APPERENCE	yellow to light yellow crystalline powder

### 5. Role in Cosmetic Formulations

#### Key Benefits

- Reduce appearance of fine lines and wrinkles
- Supports skin renewal and cell turnover
- Improves skin texture and radiance
- Reduce appearance of acne and blemishes
- Promotes smoother and firmer-looking skin
- Enhances overall skin vitality

## PRODUCT DATA SHEET (TDS)

### 6. Formulation Considerations

#### 6.1 Handling

- Protect from Light

Handle and store retinol under low-light conditions and use opaque or amber containers to prevent degradation.

- Avoid High Temperatures

Add retinol during the cool-down phase of formulation, preferably below 30°C.

- Minimize Air Exposure

Keep containers tightly closed and limit oxygen exposure during processing to maintain stability.

- Use Appropriate Protective Equipment

Wear gloves, protective eyewear, and a lab coat during handling.

- Store Under Recommended Conditions

Store in a cool, dry place, preferably at 2–8°C, away from moisture and direct sunlight.

#### 6.2 Compatibility

- Works synergistically with:
  - Niacinamide
  - Hyaluronic Acid
  - Vitamin E (Tocopherol)
  - Ceramides

### 7. Application Formats

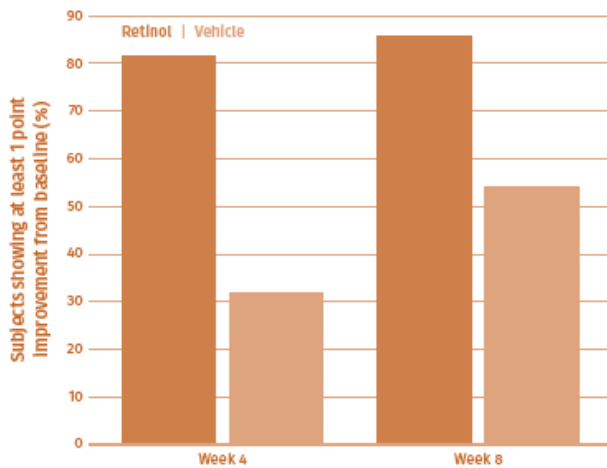
APPLICATION / USE CASE	RETINOKAP-50P (%)	PRIMARY BENEFIT
Day care / Body care products	0.1%	Wrinkle reduction and skin renewal
NIGHT CREAM	0.2%	Skin repair and smoothing
ACNE CARE SERUM	0.025–0.05%	Reduce blemishes and pores
EYE CONTOUR CREAM	0.01–0.03%	Fine line improvement
BRIGHTENING TREATMENT	0.025–0.05%	Tone and radiance enhancement

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### 8. Clinical Output

Retinokap-50P efficacy was assessed in an 8-week, randomized, double-blind, split-face, vehicle-controlled clinical study conducted during the winter season in 64 female volunteers aged 40–65 years. A moisturizer containing 0.1% retinol was applied once daily. Dermatological evaluations were performed at baseline and after 4 and 8 weeks of treatment on each side of the face using a standardized 0–9 clinical grading scale

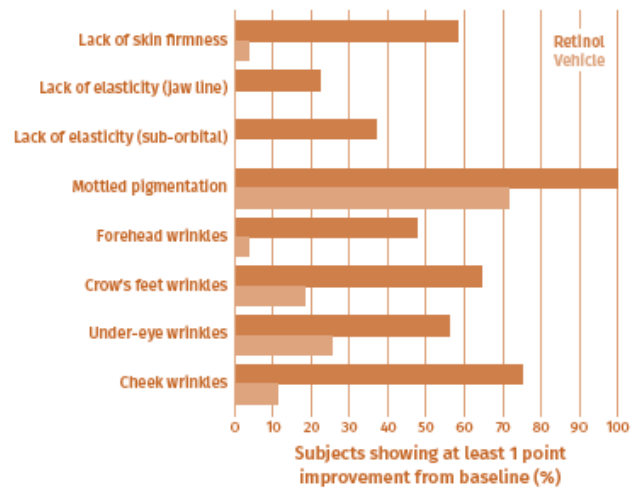
#### Retinokap-50P effect on overall photodamage



#### Results

- 86% subjects showed improvement in the end of the study based on dermatological assessment

#### Retinokap-50P effect on key aging signs



#### Results:

Significant improvement in all parameters after 2 months:

- Wrinkle reduction across the whole face
- Improvement of Skin firmness by 58%
- 100% visible effect on mottled pigmentation

# Actives

## CONTACT US

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