

Vitamin A Acetate

Description

Vitamin A Acetate, also named retinyl acetate is a naturally occurring ester of vitamin A. To increase the stability acetic acid was bound to the easily degradable vitamin A. In the human body retinyl acetate is transformed to retinol. Vitamin A is present in foods as retinol and retinyl esters (usually retinyl acetate or retinyl palmitate). Retinoids are often used as food additives because of their beneficial antioxidant effect. In cosmetic formulations Vitamin A Acetate functions as beauty ingredient that is improving skin firmness, resilience and prevents formation of small wrinkles. Vitamin A Acetate is the earliest vitamin that was discovered.

Vitamin A plays an important role in the body. It is needed for growth and bone development and to maintain the health of the skin and eyesight. Low levels of vitamin A may cause vision problems (such as night blindness) and permanent eye damage. Vitamin A Acetate is used in anti-aging agents to prevent small wrinkles furthermore it helps to regenerate UV-damaged skin. Studies have shown that skin thickness was increased significantly when using retinol. This is caused by an increase in collagen and procollagen production, finally leading to firm skin with less wrinkles. It is also used in anti-acne products for decreasing inflammatory of the skin. Vitamin A Acetate increases skin cell growth to heal lesions and scars and can possibly also decrease sebum production.

Efficacy

- reduces inflammations
- helps to fight acne
- reduces wrinkles
- acts as an antioxidant
- increases skin thickness
- increases cell growth
- helps to maintain sebum integrity

Appearance

straw yellow crystal

INCI

Retinyl Acetate

Registration

CAS-No.....127-47-9

EC-No.....204-844-2

Preservatives / Stabilizers

none

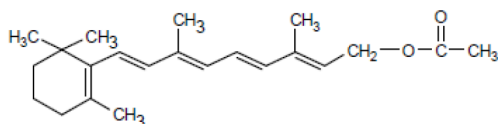


Nature needs no cosmetics,
but cosmetics need nature

Vitamin A Acetate

Characteristics

acid value.....<= 2.0
peroxide value.....<= 15 meq/kg
assay.....>= 2 800 000 I.U./g



molecular formula.....C₂₂H₃₂O₂
molecular weight.....328.50 g/mol
synonym.....retinyl acetate,
all-trans-3,7-dimethyl-9-(2,6,6-trimethyl-1-cy-
clohexene-1-yl)-2,4,6,8-nonatetraene-1-yl-ace-
tate

Application

daily care products
creams and lotions
face masks
gels and ampoules

Application concentration

skin care formulations.....0.3 % (RE)
body care formulations.....max. 0.05 % (RE)

(RE) = retinol equivalent

Incorporation

Vitamin A Acetate can easily be incorporated in most organic solvents (acetone, chloroform, ethanol, isopropanol) and in fats or oils below 40°C. It is insoluble in water and glycerol.

Toxicology

non hazardous in normal use concentration
pure raw material

- is hazardous to the aquatic environment
- may damage fertility
- may damage the unborn child
- may cause long lasting harmful effects to aquatic life

Storage & Shelf life

Vitamin A Acetate should be stored in sealed containers at cool place at 2 - 8°C.

In closed original containers the shelf life is 24 months.