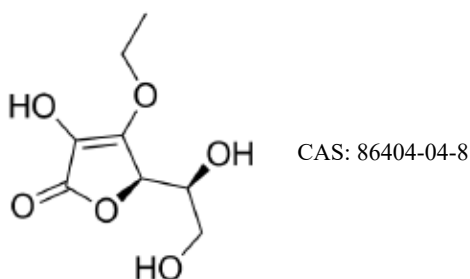


# Anallerg<sup>®</sup> -- VCE

## INCI: 3-o-Ethyl Ascorbic Acid

### Product Description

**Anallerg<sup>®</sup>--VCE** is a relatively non-discoloring vitamin C derivative and is a hydrophilic and lipophilic substance. It has the same effects as vitamin C, namely: whitening, lightening, anti-oxidation, and promoting collagen synthesis.



Appearance	White to off-white crystalline particles or solid powder
Odor	Characteristic odor
Purity(HPLC, %)	≥99%
Solubility	Easily soluble in water (solubility exceeds 10%), soluble in lower alcohols, slightly soluble in oil or esters
Dosage	0.1-2.0%

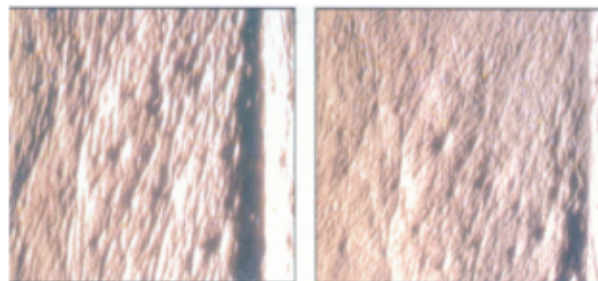
### Efficacy Verification

- Whiten and lighten spots (Tyrosinase activity inhibition test)

Dosage	0.1%	0.5%	1%
VC	96.7%	96.7%	97.6%
VCE	40.5%	89.4%	95.7%
MAP	0%	4.9%	6.1%

2% VCE can effectively whiten skin, improve the glossiness of sunburned skin, and make dark skin bright.

- Promote collagen synthesis



- Free radical scavenging

Sample	DPPH clearance rate(%)
VCE	30.0
BHT	10.6
Magnesium Ascorbyl Phosphate	0.0

Reduction of DPPH and BHT by VCE

Sample	IC <sub>50</sub> (μg/mL)
VCE	2.86
Ascorbic acid acetate	39.63
VC	1.58

DPPH free radical scavenging capacity test report

- Antioxidant

	Dosage(%)	Time (h)			
		9	12	15	18
Control		34.2	48.5	71.6	100.3
VCE	0.005	26.5	41.0	58.5	85.5
	0.02	25.0	37.5	53.8	77.3
BHT		23.0	32.7	44.7	61.3
VE		29.5	55.4	79.2	116.1

Change in peroxide of cottonseed oil heated to 100%(mg/kg)

	Dosage (%)	Time (h)				ABS
		6	9	12	15	
Control		24.8	43.7	73.0	113.9	0.109
VCE	0.02	18.9	31.1	49.5	77.1	0.260
	0.06	18.8	31.7	48.6	75.7	0.093
BHT	0.02	12.2	22.5	36.5	56.7	0.423
VE	0.02	25.6	48.9	77.4	91.2	0.092

Measurement of peroxide value change of soybean oil (100°C, 23min, mg/kg)