Nagase Viita

AA2G™

AA2G is a trademark of Nagase Viita Co., Ltd., registered in Japan, the U.S. and other countries.

Sun Care

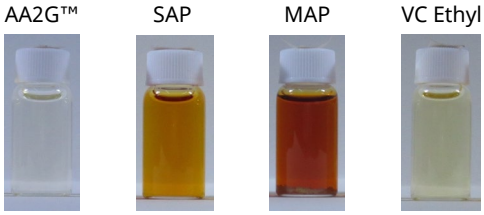
Stabilized Vitamin C Powered by Enzyme Technology, Protecting Skin from UV Damage

What is AA2G™?

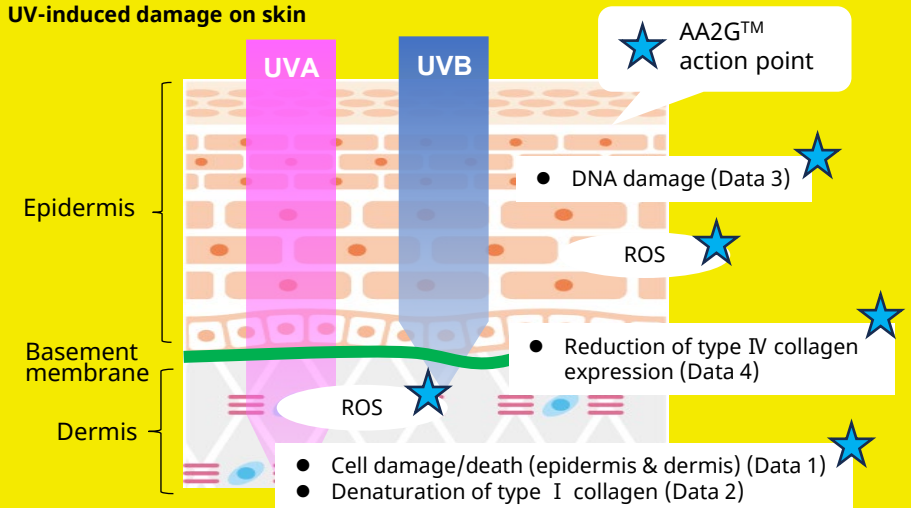
A highly stable Vitamin C derivative produced by combining Vitamin C with Glucose through enzyme technology.

Stability comparison test with other Vitamin C derivatives

Conditions: 2% solution adjusted to pH 6, stored at 40°C for 6 months

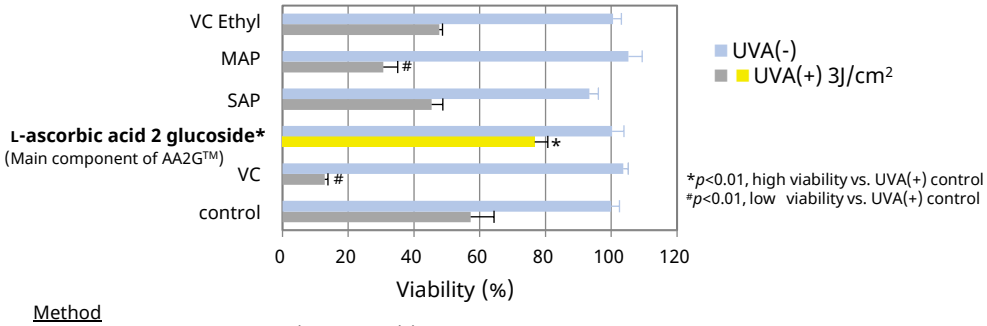


AA2G™ protects against both UVA and UVB damage.



1. Effect on UVA: AA2G™ suppressed UVA-induced cell damage.

Comparison with other VCs



Method
- NHEK precultured with VCs (0.25 mmol/L) were exposed to UVA radiation.
- The cell viability was measured using AlamarBlue.

Information

INCI NAME
Ascorbyl Glucoside

SUGGESTED USAGE LEVEL

Skin care	0.5-5.0%
Anti-aging	0.5-5.0%
Brightening	1.0-2.0%

Net. 1kg or 10 kg

EXPIRATION
18 months (net 10 kg) or
12 months (net 1 kg)
from the production date

COUNTRY OF MANUFACTURE
Japan

CERTIFICATION

COSMOS APPROVED — raw material verified by ECOCERT GREENLIFE, conform to the COSMOS Standard

NATRUE Certified

IECIC Listed

Certified as **Kosher and Halal**

SUSTAINABILITY

- ✓ **Natural Origin Index = 1.0** (ISO 16128)
- ✓ **Readily Biodegradable** (evaluated by OECD Chemical Substance Test Guideline No. 301F)
- ✓ **Animal Origin Free Material**
- ✓ **Non-GMO**

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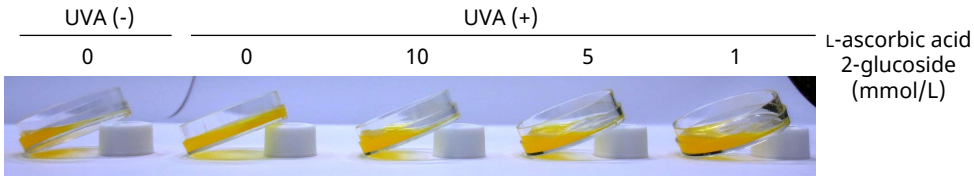
2. Effect on UVA: AA2G™ suppressed UVA-induced denaturation of type Ⅰ collagen.

Method
- A mixture of type I collagen solution with or without L-ascorbic acid 2-glucoside was exposed to UVA irradiation and observed.
- The gelation indicates the denaturation (crosslinking) of type I collagen.

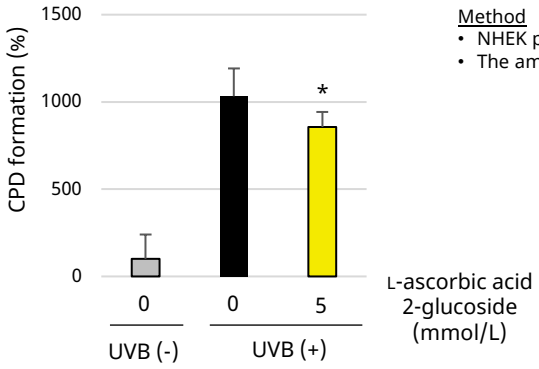


AA2G™ suppressed the gelation of type I collagen solutions induced by UVA irradiation.

3. Effect on UVB: AA2G™ suppressed UVB-induced DNA damage.

Cyclobutane Pyrimidine Dimer (CPD) formation induced by UV radiation

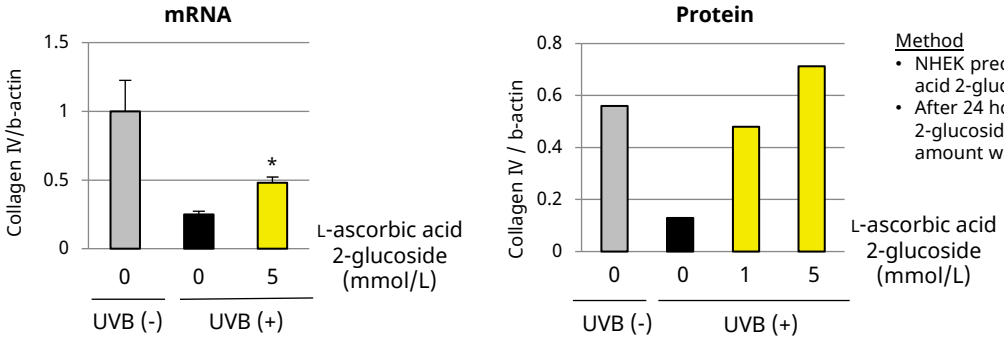
Primary UVB-induced DNA lesions



Method
- NHEK precultured with or without L-ascorbic acid 2-glucoside were exposed to UVB radiation.
- The amount of CPD was measured from the cell extract.

*p<0.05 vs. 0 mmol/L L-ascorbic acid 2-glucoside

4. Effect on UVB: AA2G™ inhibited UVB-induced reduction of type Ⅳ collagen expression.



Method
- NHEK precultured with or without L-ascorbic acid 2-glucoside were exposed to UVB radiation.
- After 24 hours of culture without L-ascorbic acid 2-glucoside, the cells were collected, and each amount was measured.

*p<0.05 vs. 0 mmol/L L-ascorbic acid 2-glucoside

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