

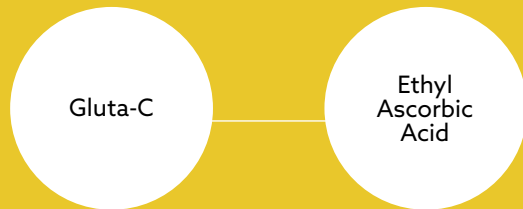
Vitamin C Solutions



Celcode's Vitamin C Solutions

In our search for skin brightening and lightening solutions with antioxidant effects, we've developed a number of powerfully effective formulations.

Discover some of
our Vitamin C and
antioxidant solutions.



GLUTA-C

A Revolutionary Trio of Vitamin C, Glutathione, and Gold

Gluta-C represents a watershed in ascorbic acid blends.

Glutathione and gold submicroparticles make it remarkably more effective than conventional vitamin C formulations. This makes it a unique skin brightening and protective solution.



How Gluta-C Works

Gluta-C owes its efficacy to the stability glutathione and submicroparticles give its ascorbic acid content. The former counteracts ascorbic acid's pro-oxidant activity while the latter protects it.

This makes it less prone to breakdown compared to other vitamin C and antioxidant blends. This means more of the actives actually reach the skin and do their work.

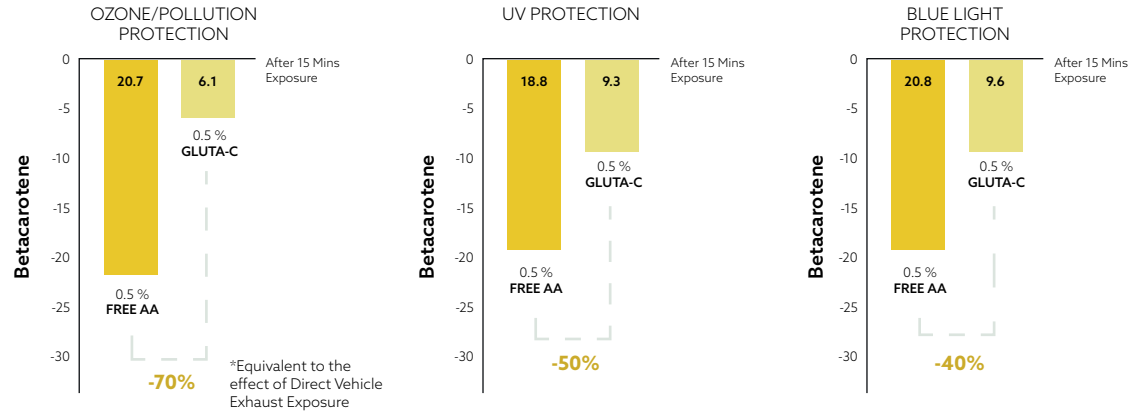
This improves the skin in several ways:

It brightens skin
instantly by reducing
pigmentation.

It enhances skin
elasticity by stimulating
collagen production

It protects the skin
from environmental
assault, inflammation,
and pollution

BLUE LIGHT, OZONE & UV PROTECTION



↓ Betacarotene Level = ↑ Oxidant → Weak Anti-Oxidant Efficacy

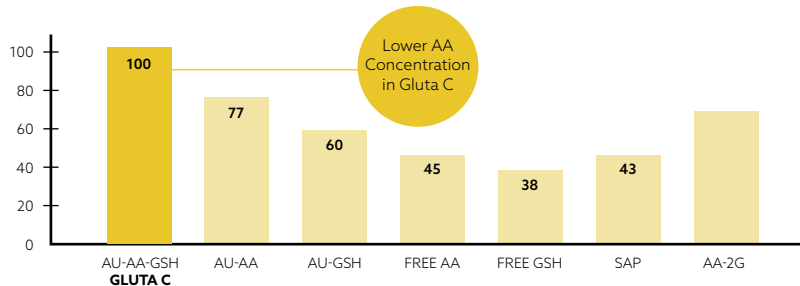
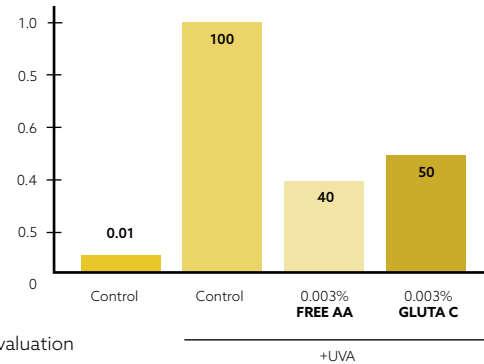
Gluta-C has superior anti-pollution and blue light protection properties compared to Free Ascorbic Acid

ANTI-OXIDANT EFFICACY: LIPOPEROXIDATION

Gluta-C is More Effective than Pure Ascorbic Acid

Even at much lower Ascorbic Acid concentrations, **Gluta-C** results in superior protection against **UVA lipoperoxidation**

*In vitro lipoperoxidation assay. HaCaT cells exposed to UVA. MDA - TBARs Evaluation



ANTI-OXIDANT EFFICACY: FREE RADICAL

Gluta-C is more effective in neutralizing Free Radicals than Pure AA and AA Derivatives

*DPPH assay. Evaluation of the amount of neutralized DPPH free radicals. **Product centration 0.03%**

The Benefits of Gluta C

100%

**stable up to
6 months**

Lasts and is effective
longer than other blends

Up to 70%

**better environmental
protection**

Outdoes free ascorbic acid
in protecting skin from UV,
ozone, and blue light

**Instant skin
brightening**

Reduces skin
pigmentation
and evens the
complexion

Up to 62%

**better antioxidant
efficacy**

Outdoes pure ascorbic acid
and derivatives in fighting
free radicals

**Improves skin
elasticity**

Induces optimal
collagen production

**Reduces
inflammation**

Protects the skin from
assault and pollution
to reduce irritation



Ethyl Ascorbic Acid (EAA)

An Ultra-Stable, Ultra-Brightening Form of Vitamin C

Ethyl ascorbic acid or EAA is a highly stable form of vitamin C that inhibits tyrosine and melanin production.

What makes it noteworthy is that it's among the fastest-acting and longest-lasting inhibitors for melanin production. This makes it a great option for fast and lasting skin whitening.

How EAA Works

EAA prevents melanogenesis, which is the production of melanin. Most importantly, it does so directly, whereas other older whitening agents need help from compounds like enzymes to do it.

EAA thus works faster than traditional whiteners. It does so by inhibiting tyrosinase and melanin monomer polymerisation, both of which are crucial to melanin production.

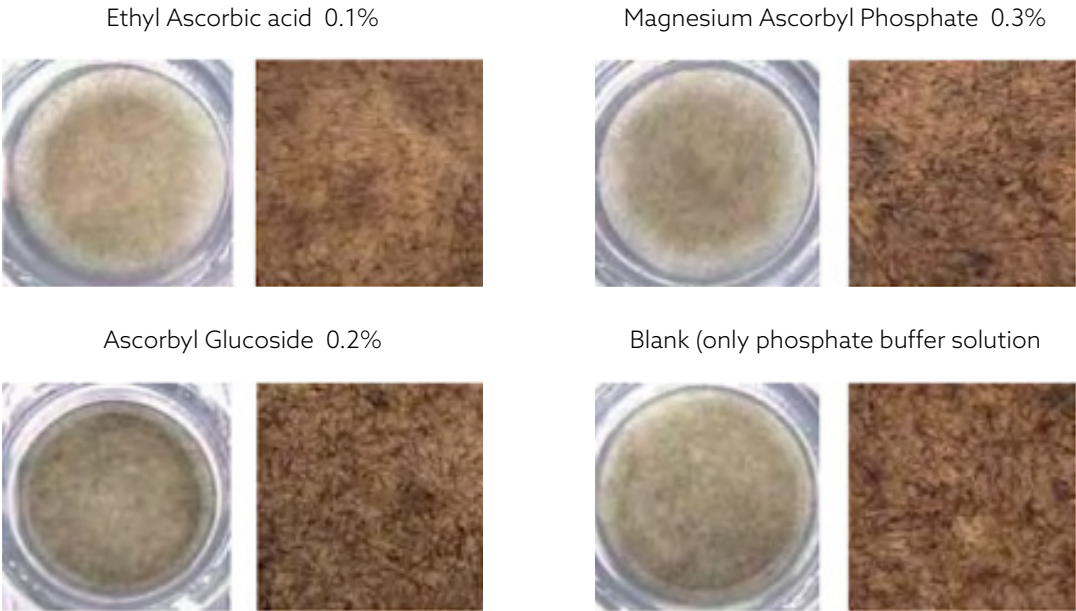
It even has higher skin penetration due to having an acid form at pH 4.5. Furthermore, it stimulates collagen synthesis more effectively than ascorbic acid and ascorbic acid derivatives, leading to healthier-looking skin.



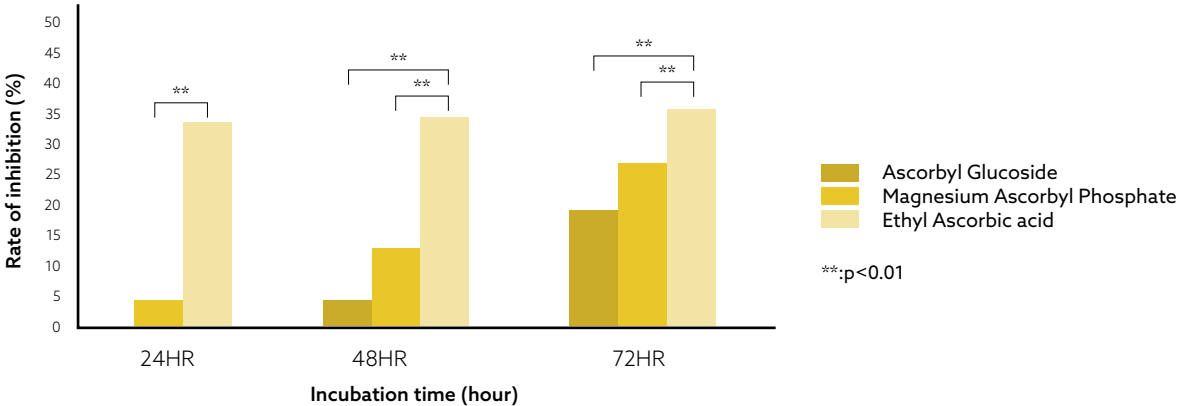
RESULT OF WHITENING EFFECT TEST ON 3D-SKIN MODEL (AFTER 14 DAYS)

Ethyl Ascorbic acid showed higher inhibition effect of melanogenesis than Ascorbyl Glucoside (double concentration) and Magnesium Ascorbyl Phosphate (triple concentration) did.

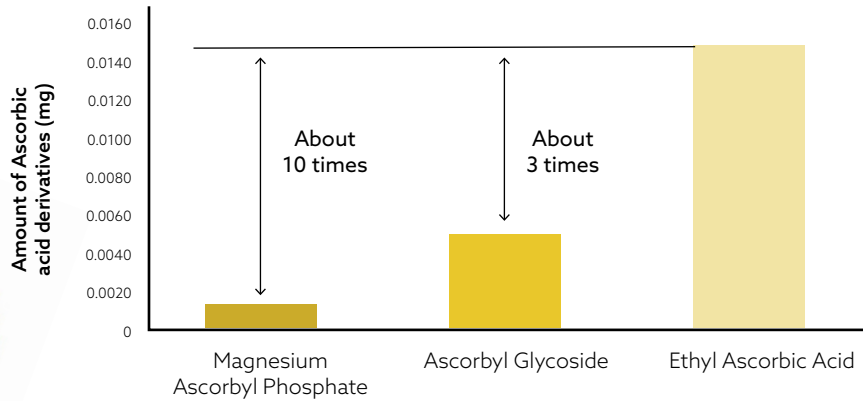
PHOTOGRAPH OF 3D SKIN MODEL



RESULTS OF MELANOGENESIS INHIBITION TEST



AMOUNT OF ASCORBIC ACID DERIVATIVES PENETRATION



The Benefits of Ethyl Ascorbic Acid

Faster skin lightening results

Direct inhibition on melanogenesis means faster action

10x better skin penetration

than Magnesium Ascorbyl Phosphate

Easier and faster absorption for optimal results

More effective at inhibiting melanogenesis than other whiteners

Inhibits melanogenesis 15% better than Ascorbyl Glycoside after 72 hours from use

Better collagen synthesis

Maximises new skin cell production for a younger look

More effective skin brightening at just 0.1% concentration

Better at whitening than more concentrated ascorbic acid derivatives

Longer-lasting effects

Dual-action inhibition of melanogenesis prevents skin darkening