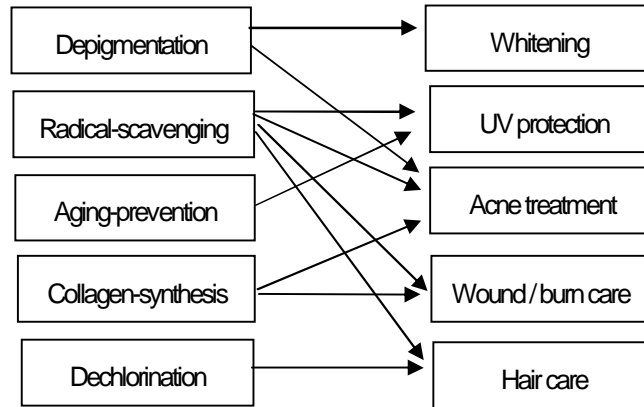




- **Suppressing effect on the pigmentation**

Inhibiting the activity of tyrosinase, with spots removing and whitening effect.



MAP has been mainly utilized as an active ingredient of whitening cosmetics. Recent investigations show us various possibilities to utilize them as multi-functioning, stable 'provitamin C'. Intradermal and extradermal protective effects against UV-generated radicals suggest the use for UV-care products.

As clinical studies strongly support, acne, being re-identified as a radical disease, is another candidate that we should apply MAP for. Enhancement of collagen synthesis helps the recovery of wound and burn, in which also reduction of active oxygen species have an important role.

APPLICATION:

- Skin lightening products
- Daily skin care
- Sun care
- Oral care

COMPATIBILITY

Incompatible with metal ions (degradation)

STABILITY IN FORMULATIONS

- | | |
|-------------|--|
| pH value | • about pH 7 |
| Light | • Unstable under UV light |
| Temperature | • 50 °C at least for 10 weeks (aqueous solution) • 80 °C at least for 20 hours (aqueous solution) |



Spec-Chem Ind.

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GENERAL INFORMATION:

Appearance: Almost white powder

Assay: Not less than 98.5%

Color of solution (3% solution): Pale yellow, transparent

pH value (3% in water): 7.0 -- 8.5

Specific rotation $[\alpha]_{D20}$: +43-+50(c=2)

Solubility: 8g/100ml water (25°C)

USE LEVEL:

- | 3 % in skin lightening products (quasi drug approved in Japan, use level 3.0 %);
- | 0.5 - 2 % in anti-aging and clarifying products;
- | - 0.5 % in tooth pastes.

PACKAGE:

1.0kg Aluminum foil bag.