Antiox GT, the natural antioxidant solution for your anhydrous cosmetic formulas

leos

NATURAL

SCIENCE

PERFORMANCE

TODAY'S NATURAL ANTIOX. SOLUTIONS

Two natural solutions :

Tocopherols

Random price increases GMO risk

Rosemary extracts

Unpleasant odour Possible allergenicity

Find a natural alternative:

- Effective
- Non-GMO plant source
- Non-allergenic risk
- Neutral in odour and colour

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THE SOLUTION PROPOSED BY OLEOS

Find alternative molecules with **a**

powerful antioxidant activity,

obtained from

100% natural ingredients,

non-GMO

non-allergenic

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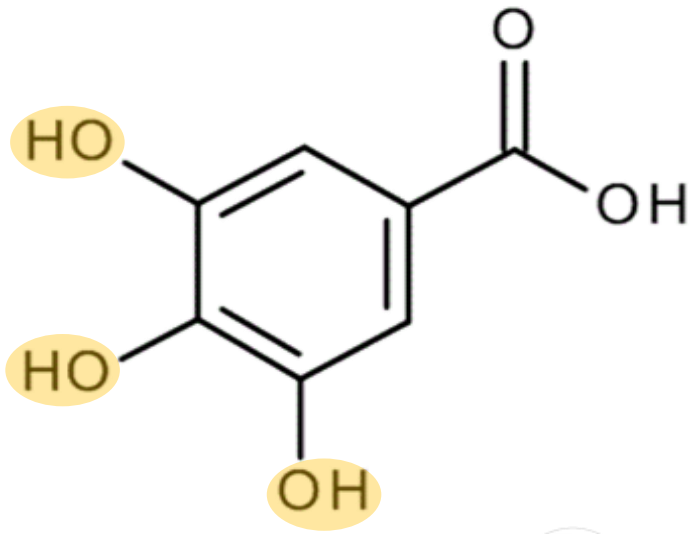
THE SOLUTION PROPOSED BY OLEOS

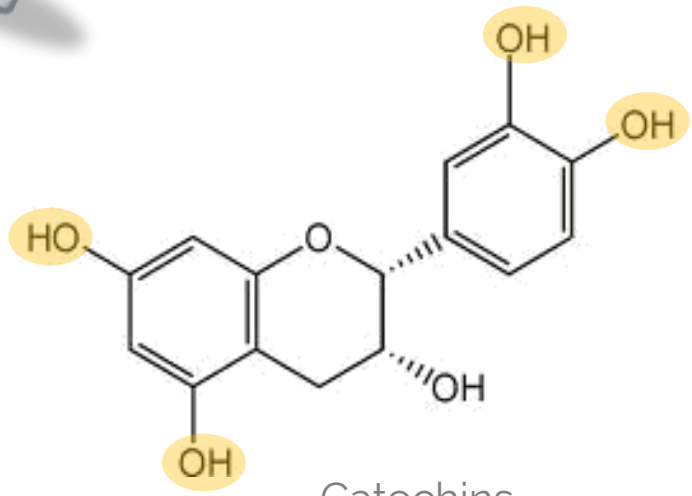
Gallic acid from 100% natural origin, purified at 99 %

→ highly effective triphenolic structure

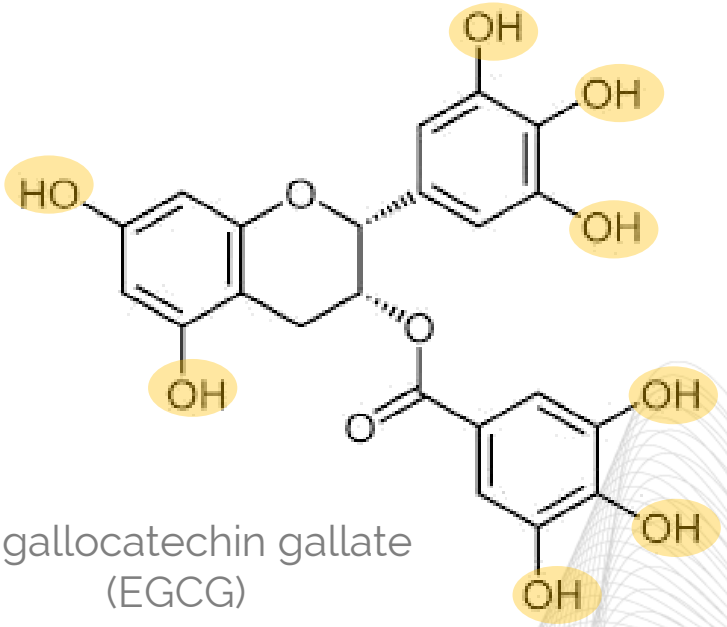


THE SOLUTION PROPOSED BY OLEOS

added in synergistic amounts with green tea polyphenols



Catechins



Epigallocatechin gallate (EGCG)

THE SOLUTION PROPOSED BY OLEOS

These molecules are very effective but also polar

How can we formulate them easily in oily phases ?

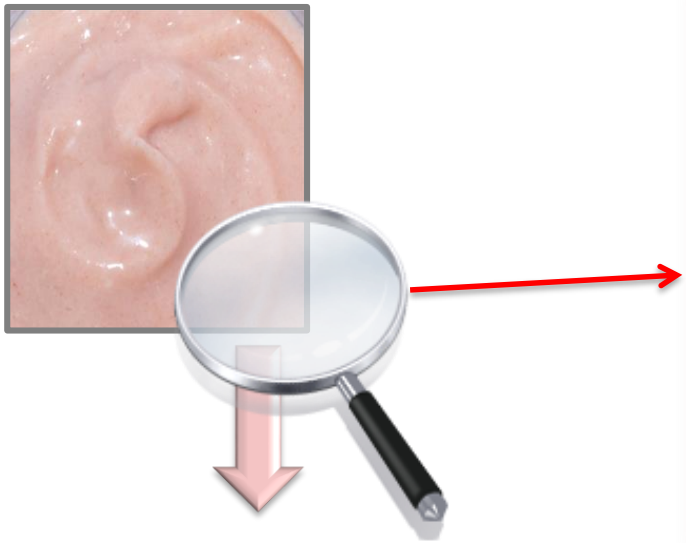
Thanks to Oléos technology :

Green patented process : Oléo-éco-extraction

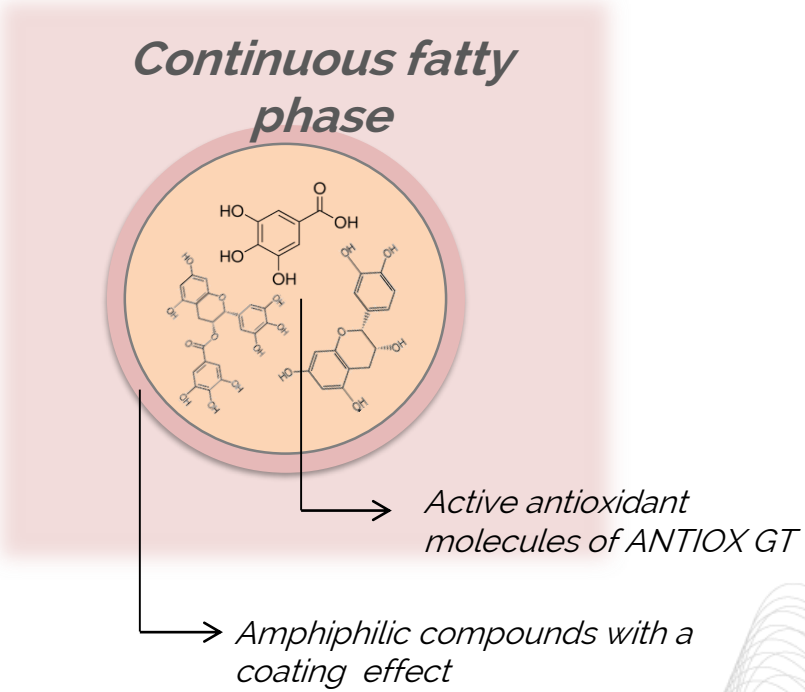
Stable oily complex with a high concentration of active molecules

ANTIOX GT

WHAT IS THE CONCEPT OF ANTIOX GT?



A molecular organisation in the form of colloids, which is stable in an homogeneous fatty phase

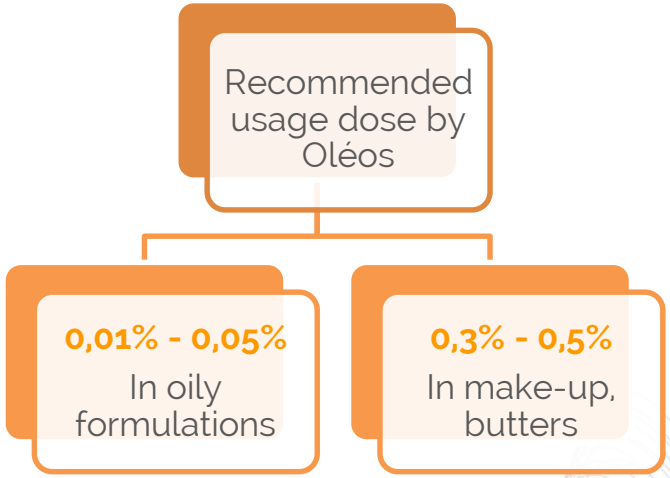


ANTIOX GT FORMULATION

The use

- Lipid-soluble up to 200 ppm [0,02%]
- Lipid-dispersible up to 5000 ppm [0,5%]
- Could be used in anhydrous formulations : oily serums, butters, make-up, lip-sticks, care oils…

The dose



ASPECT, COLOUR, ODOUR

Odourless, Colourless

	Tocopherol	Rosemary extracts	ANTIOX GT
			
Appearance	Viscous	Oily	Creamy
Colour	Dark brown	Brown	Light pink
Odour	+	+++	Neutral

ANTIOX. SOLUTION WITHOUT ALLERGENS

According to the directive 2003/15/EC

Commercial rosemary extract

Teneur en / *Content in* ALLERGENES / *ALLERGENS*	N° CAS	Teneur / *Content* ppm
2-benzylidèneheptanal / *2-benzylideneheptanal*	122-40-7	< 1
Amylcinnamyl alcool / *Amylcinnamyl alcohol*	101-85-9	< 1
Alcool benzylique / *Benzyl alcohol*	100-51-6	< 1
Salicylate de benzyle / *Benzyl salicylate*	118-58-1	< 1
Alcool cinnamylique / *Cinnamylic alcohol*	104-54-1	< 1
Cinnamaldéhyde / *Cinnamaldehyde*	104-55-2	< 1
Citral / *Citral*	5392-40-5	< 1
Coumarine / *Coumarine*	91-64-5	< 1
Eugénol / *Eugenol*	97-53-0	21
Géraniol / *Geraniol*	106-24-1	< 1
7-hydroxycitronellal / *7-hydroxycitronellal*	107-75-5	< 1
Lyral / *Lyral*	31906-04-4	< 1
Isoeugénol / *Isoeugenol*	97-54-1	< 1
Alcool 4-méthoxybenzylique / *4-methoxybenzyl alcohol*	105-13-5	< 1
Benzoate de benzyle / *Benzyl benzoate*	120-51-4	< 1
Cinnamate de benzyle / *Benzyl cinnamate*	103-41-3	< 1
Citronellol / *Citronellol*	106-22-9	< 1
Farnésol / *Farnesol*	4602-84-0	< 1
Hexylcinnamaldéhyde / *Hexylcinnamaldehyde*	101-86-0	< 1
Lilial / *Lilial*	80-54-6	< 1
d-Limonène / *d-Limonene*	5989-27-5	20
Linalol / *Linalool*	78-70-6	10
Oct-2-ynoate de méthyle / *Methyl Oct-2-ynoate*	111-12-6	< 1
alpha-cétone / *alpha-Ketone*	127-51-5	< 1
Evernia prunastri / *Evernia prunastri*	90028-68-5	< 1
Evernia furfuracea / *Evernia furfuracea*	90028-67-4	< 1

Σ allergens= 51 ppm

ANTIOX GT

	Résultats
Allergènes dans les cosmétiques	
Amyl Cinnamal - CAS n°:122-40-7	<1 (1)
Amylcinnamyl Alcohol - CAS n°:101-85-9	<1 (1)
Benzylalcohol - CAS n°:100-51-6	2
Benzyl Salicylate - CAS n°:118-58-1	<1 (1)
Cinnamyl Alcohol - CAS n°:104-54-1	<1 (1)
Cinnamal - CAS n°:104-55-2	<1 (1)
Citral - CAS n°:5392-40-5	<1 (1)
Coumarin - CAS n°:91-64-5	<1 (1)
Eugénol - CAS n°:97-53-0	<1 (1)
Géraniol - CAS n°:106-24-1	<1 (1)
Hydroxycitronellal - CAS n°:107-75-5	<1 (1)
Hydroxyisohexyl 3-Cyclohexene Carboxaldehyde - CAS n°:31906-04-4	<1 (1)
Isoeugenol - CAS n°:97-54-1	<1 (1)
Anise Alcohol - CAS n°:105-13-5	<1 (1)
Benzyl Benzoate - CAS n°:120-51-4	<1 (1)
Benzyl Cinnamate - CAS n°:103-41-3	<1 (1)
Citronellol - CAS n°:106-22-9	<1 (1)
Farnésol - CAS n°:4602-84-0	<1 (1)
Hexyl Cinnamal - CAS n°:101-86-0	<1 (1)
Butylphenyl Methylpropional - CAS n°:80-54-6	<1 (1)
Limonène	<1 (1)
Linalool (forme majoritaire) - CAS n°:78-70-6	<1 (1)
Methyl 2-Octynoate - CAS n°:111-12-6	<1 (1)
Alpha-Isomethyl Ionone - CAS n°:127-51-5	<1 (1)
Evernia Furfuracea Extract (qualitatif)	négatif
Evernia Prunastri Extract (qualitatif)	négatif

Σ allergens= 2 ppm

TOXICOLOGICAL TESTS

Toxicological tests:

ANTIOX GT tested at 5%
10 times the maximum recommended usage dose

- ***No dermal toxicity***
- ***No ocular toxicity***
- ***No photo-toxicity***

Ingredient classified as non-irritant

REGULATORY DATA

INCI name

Helianthus Annuus Seed Oil (and) Gallic Acid (and) Glyceryl Stearate (and) Copernicia Cerifera (Carnauba) Wax (and) Camellia Sinensis Leaf Extract

Certified by ECOCERT*

ECO CERT ORGANIC COSMETIC

Regulatory status :

- China ✓
- USA ✓
- Australia ✓
- Japan ✓
- Canada ✓

* This raw material is certified by ECOCERT Greenlife, according to the ECOCERT standard for Natural and Organic cosmetics available at http://cosmetics.ecocert.com

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ANTIOX GT, AN EFFECTIVE ANTIOXIDANT

Efficacy tests

ANTIOX GT has been tested between 0.01% and 0.5% [100 ppm to 5000 ppm]

- **In vegetable oils and butters**
- **In make-up (lipsticks)**

Versus BHA, two commercial tocopherols mix* at 50% or 70% level, and two commercial rosemary extracts.

** Products' references on request*

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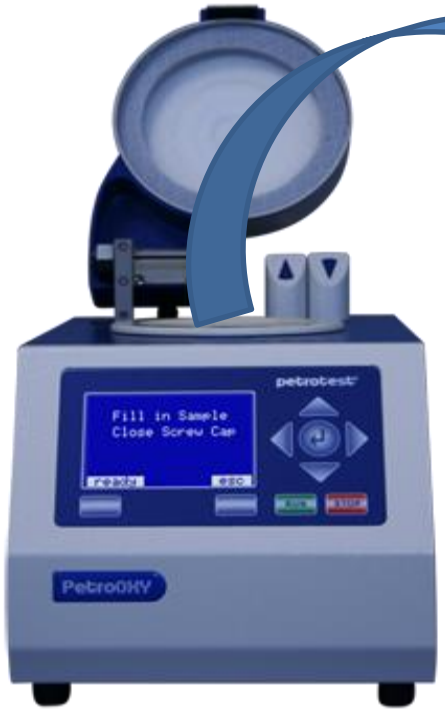
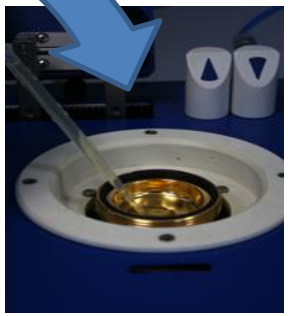
OXIDATIVE STABILITY TESTS

Use of an automatic device for standardized and reproducible stability measures

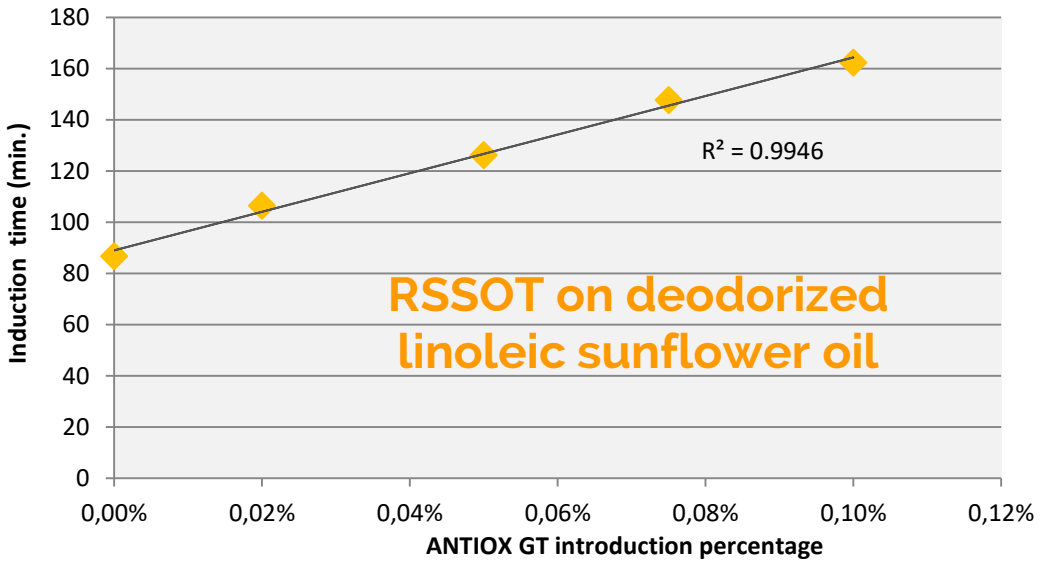




Measure of the induction time thanks to the RSSOT -**Rapid Small Scale Oxidation Test-** performed at high temperature and under oxygen pressure.
Possible application for oils, fatty phases and finished products.

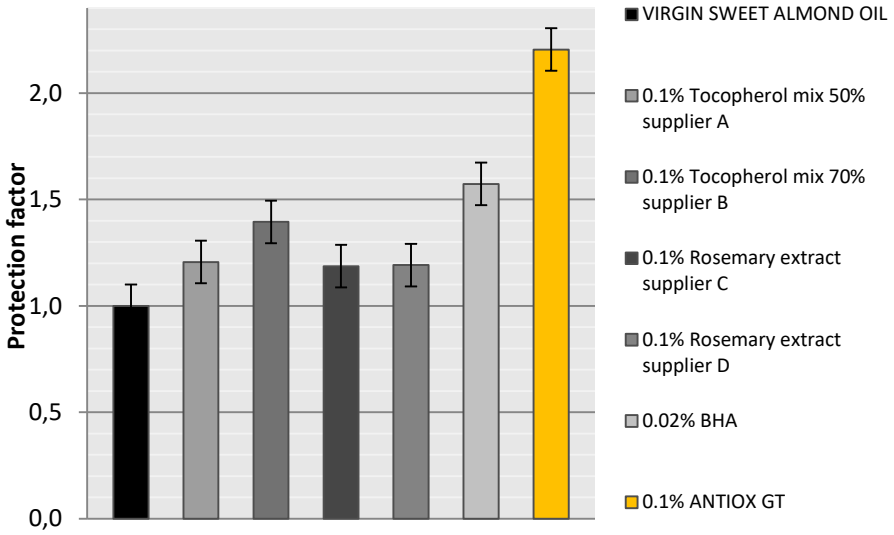
ANTIOX GT DOSE-DEPENDENT EFFECT

There is a steady increase in the effectiveness of ANTIOX GT in direct proportion to the amount used in oils between 100 ppm and 1000 ppm [0.01% to 0.1%]

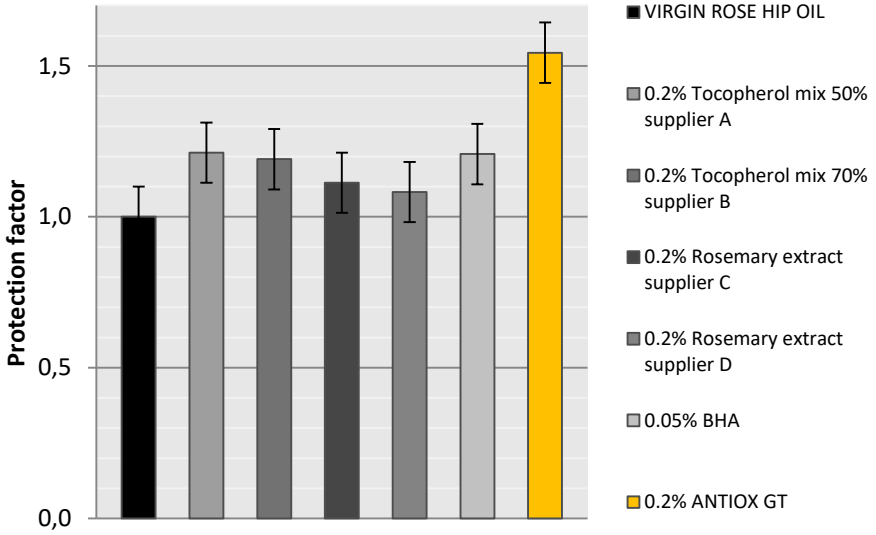


ANTIOX GT ANTIOXIDANT PROPERTIES

Virgin sweet almond oil with 25% of PUFA w6



Virgin rose hip oil with 80% of PUFA w6 + w3

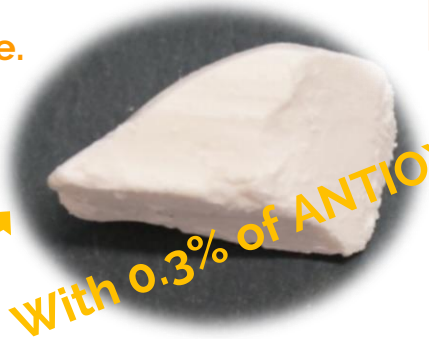


*Whatever the model oil or its oxidation-sensitivity, **ANTIOX GT** is always the most effective solution for protecting oils from oxidation, compared to the other antioxidant solutions on the market, and at equivalent usage dose.*

ANTIOX GT IN MAKE-UP PRODUCTS

Lip balm with 94% of vegetable waxes and oils
+ 1% of pro-oxidative zinc oxide.

Without ANTIOX GT

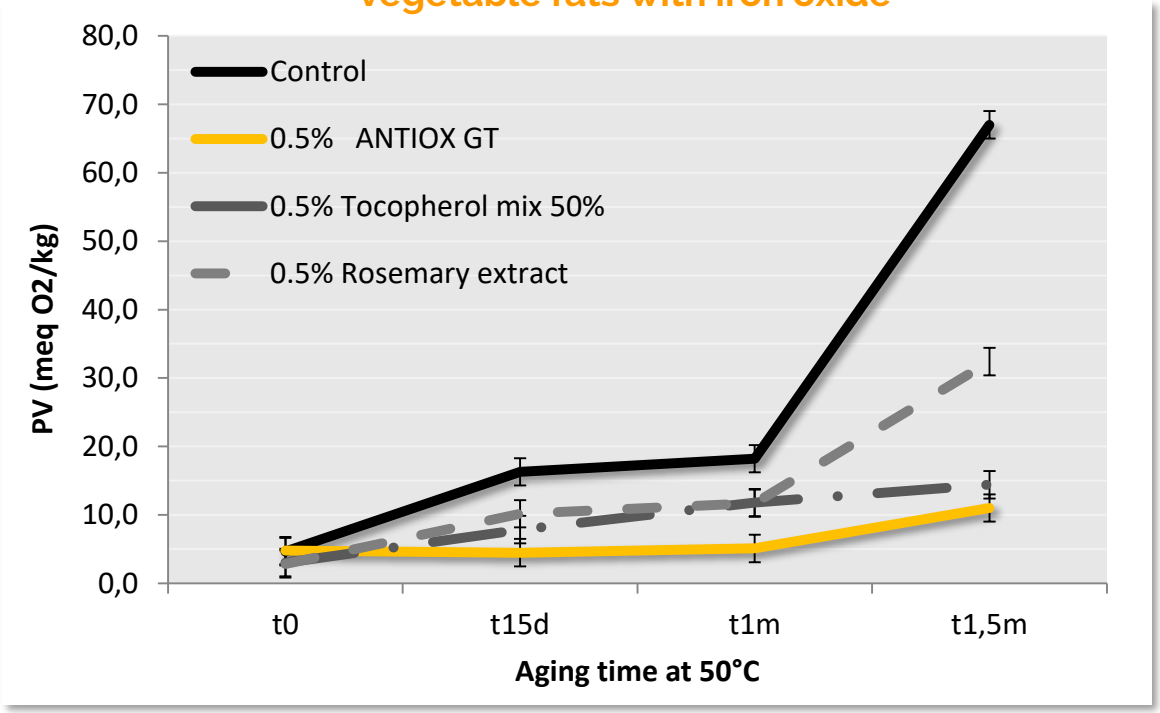


With 0.3% of ANTIOX GT

0.3% of ANTIOX GT prevents the lip balm yellowing and a rancid flavor developing during a 2 months storage at 40°C, even in presence of pro-oxidant metal.

ANTIOX GT IN MAKE-UP PRODUCTS

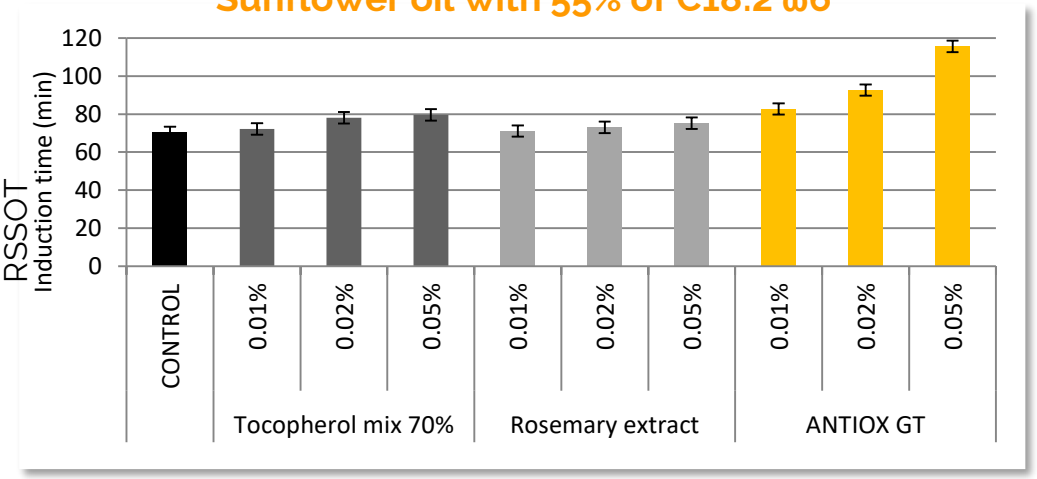
Red lipstick ultra concentrated in vegetable fats with iron oxide



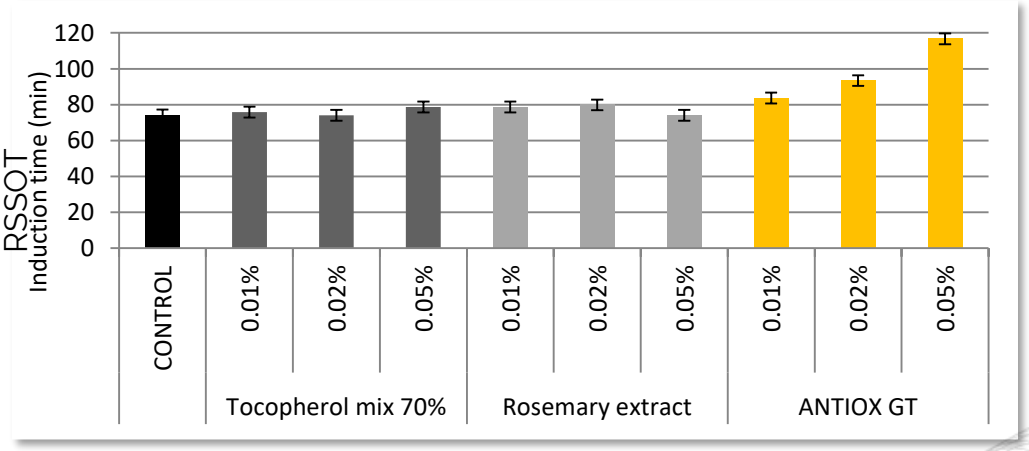
0.5% of ANTIOX GT slows down the oxidation of the red lipstick in oxidative conditions : presence of air, the effect of heat (50°C) and in presence of pro-oxidative iron oxide.

ANTIOX GT IN OILS

Sunflower oil with 55% of C18:2 ω6



Borage oil with 62% of C18:2+C18:3 ω6



ANTIOX GT appears more effective than the tocopherols and rosemary extracts in protecting the polyunsaturated oils from oxidation at equivalent usage dose [100 ppm to 500 ppm]

IN SUMMARY…

Natural origin

Non-toxic
Non-allergenic

Stable, neutral odour and colour

Effective in anhydrous formulas

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