



# OPC-rich grape seed extract for maximized antioxidant properties

## Standardised content in OPCs

OPCs (oligomeric proanthocyanidins) are flavonoids made of 1, 2 or 3 molecules of catechin and/or epicatechin. They are generally called oligomers (dimers, trimers). If the degree of polymerisation is higher, then they are preferably called procyanidolic polymers.

The extraction process from which VinOseed® is made allows to concentrate the polyphenols naturally present in grape seeds.

**VinOseed® thus offers a natural source of grape polyphenols and especially OPCs.**

## Antioxidant properties

Grape seed extracts are particularly interesting for their antioxidant effects, thanks to their OPCs content.

An *in vitro* study confirmed VinOseed®'s properties by comparing its Specific Antioxidant Activity to Vitamin E.

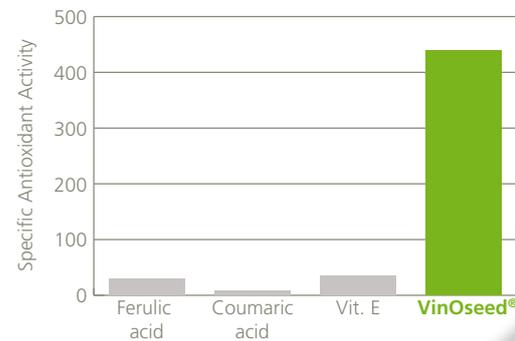
**VinOseed®'s guaranteed content in OPCs allows exceptional antioxidant properties.**

**VinOseed® ORAC value  
= 14000 µmol TE/g**

*VinOseed® : strict quality control and guaranteed actives content for each batch produced:*

<b>Total polyphenols</b> <i>(method : Folin-Ciocalteu)</i>	<b>&gt; 80%</b>
<b>OPC</b> <i>(method : HPLC)</i>	<b>&gt; 12%</b>
<b>Including :</b>	
monomers	32%
dimers	60%
trimers	8%
<b>Procyanidolic polymers</b>	<b>&gt; 30%</b>

*In vitro study - Comparison of the Specific Antioxidant Activity (SAA - Cu<sup>2+</sup> induced LDL oxidation) :*



## Optimal bio-availability

OPCs are particularly bioavailable compounds: thanks to their small size and their low molecular weight, they are easily absorbed and metabolized by the body, for an efficient antioxidant protection.

Furthermore, **grape seeds OPCs are actives in both water and fat soluble phases**, whereas vitamins are soluble in either one or the other.

*Manach C, et al. Review of 97 bioavailability studies. Am J Clin Nutr. 2005. 81:230S-242S.*

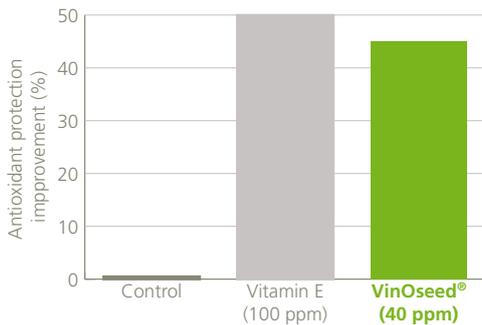


## Successfully tested for feed application

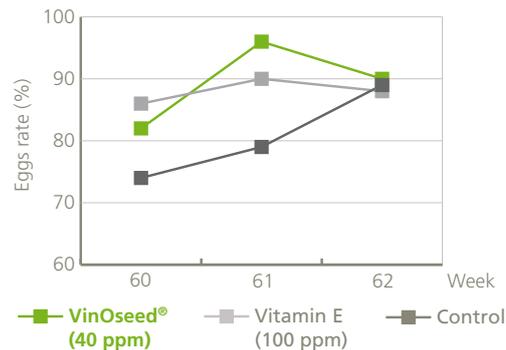
The use of VinOseed® as an alternative to Vitamin E was recently evaluated in laying hen. This test confirms the antioxidant properties of our premium grape seed extract.

*Study conducted on laying hens (N=72) aged between 59 and 62 weeks.*

*In vivo study - Evaluation of the antioxidant protection of VinOseed® compared to Vitamin E - KRL Test :*



*In vivo study - Impact of VinOseed® on the eggs rate compared to Vitamin E :*



**VinOseed® brings in a strong antioxidant protection comparable to Vitamin E, which allows to maintain high level breeding performance in animals subject to oxidative stress.**

### YOUR CHOICE OF ANTIOXIDANT FOR FEED APPLICATIONS

- **Preservation of the organoleptic and nutritional properties of feed** (fat-soluble vitamins, essential fatty acids...)
- **Reduction of free radicals production** (generated in animals under stressful breeding conditions)
- **Guaranteed natural and French origin**

### Technical data

- > **Solubility** : > 95% in water at 1%
- > **Stability** : 24 months, in a cool and dry place, in original packaging
- > **Naturalness & Origin** : 100% natural ingredient made of white grape harvested in France.



# VinOseed®

## OPC-rich grape seed extract

- Exclusive premium raw material
- Guaranteed content in OPCs
- Efficient antioxidant protection

### Exclusive premium raw material

VinOseed® is a white grape seed extract sourced from a famous French vineyard region. The grapes are carefully selected and harvested at ripeness for the seeds to offer the highest content in OPCs.

VinOseed® is the result of the association of an exceptional "terroir" with thousands of years of agricultural expertise & a specific extraction process, which allow a top quality extract with high guaranteed content in OPCs.

### Reinforced antioxidant & health properties

- Scientific studies have shown that the antioxidant power of oligomeric proanthocyanidins (OPCs) is:
  - **20 times stronger than vitamin C**
  - **50 times stronger than vitamin E**

Furthermore, grape seed OPCs are active in both water and fat soluble phases, whereas vitamins are only soluble in one or the other.

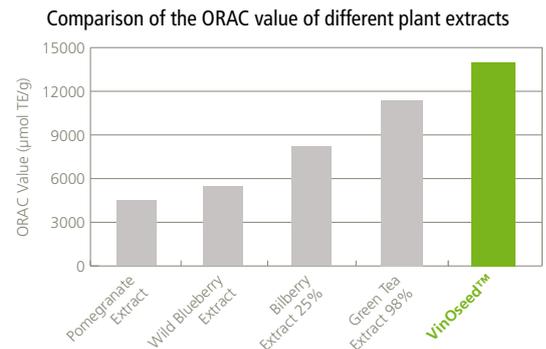
- VinOseed® offers a strong antioxidant activity thanks to its content in OPCs, which are particularly bioavailable compounds\* (**typical ORAC value = 14000 µmol TE/g**).
- Thanks to its white grape seed origin, VinOseed® offers innovative health properties. It is known that obesity is associated with a state of oxidative stress. Recent studies showed that white Grape Seed Extract (GSE) could be involved in obesity-risk reduction\*\*:

  - **improves antioxidant status by reducing free radicals production**
  - **limits cardiovascular risk by increasing adiponectin expression (anti-inflammatory cytokine)**

#### NATURAL ALTERNATIVE FOR A HEALTHY LIFE

- Guaranteed content in OPCs
- Suitable for a broad range of health applications: cardiovascular prevention, anti-aging effect, antioxidant protection,...
- Recommended dosage: 400mg/day

<b>Total polyphenols</b> (method: Folin-Ciocalteu)	> 80%
<b>OPC</b> (method: HPLC)	> 12%
<b>Including:</b>	
monomers	32%
dimers	60%
trimers	8%
<b>Procyanidolic polymers</b>	> 30%



Effect of white GSE supplementation on oxidative stress markers in case of induced obesity.



Effect of GSE supplementation on anti-inflammatory cytokine expression in case of high-fat diet.



\* Manach C, Williamson, G, Morand C, et al. Bioavailability and bioefficacy of polyphenols in humans. I. Review of 97 bioavailability studies. Am J Clin Nutr. 2005; 81:2305-2425.

\*\* In vivo studies. Décordé K. et al. Mol. Nutr. Food Res 2009 May; 53(5):659-66 & Terra X. et al. J Nutr Biochem. 2009 Mar;20(3):210-8.