

GrapEX Grape Seed Tannin



Enhancing naturally

Tannins are natural substances originating from plants and produced by extraction from various botanical species. Chemically, tannins can be divided into two major groups:

- Condensed tannins (proanthocyanidins)
- Hydrolyzable tannins

GrapEX grape seed tannin, also known as GSEEDEX, is a condensed tannin (oligomeric proanthocyanidin or proanthocyanidins), made from premium white grape seeds. Optimum processing conditions to extract the proanthocyanidins from the seeds are used focussing on keeping the composition of the product as nature intended. In this respect, GrapEX grape seed tannin is manufactured using simple and natural processes resulting in a product that is 100% grape seed tannin from premium grapes.

Product Applications

GrapEX grape seed tannin, a light brown, water soluble powder can be used in wine to:

- reinforce the body and structure of musts and wines
- assist in the maturation process
- prevent metal catalyzed hazes
- enhance red colour in wine by increased co-pigmentation
- increase the bacterial and antioxidant action of SO₂, and the total antioxidant status of the wine.

GSEEDEX is high in anti-oxidants and also used as a natural dietary supplement.



Chemistry of GrapEX grape seed tannin

Grape seeds, in particular the residual inner epidermis and the outer parenchymous cell layer are rich in procyanidins, a class of condensed tannins (proanthocyanidins) consisting of polymers of catechin and epicatechin units. These can be broadly divided into three groups:

- Monomers – includes compounds such as gallic acid, catechin, epicatechin, epigallocatechin and epicatechin gallate.
- Oligomeric Procyanidins – low molecular weight polymers of catechin, epicatechin, epigallocatechin and epicatechin gallate. Typically dimers (2), trimers (3) and tetramers (4) are included in this group.
- Polymeric Procyanidins – higher molecular weight polymers based on procyanidin pentamers, hexamers, to 20 units or more, together with their gallates. These compounds are often referred to as 'condensed tannins'.

Antioxidant Activity / Profile

While plant derived polyphenolics generally process antioxidant activity, their activity varies. The condensed procyanidins of grape seed exist as oligomers, containing up to five or six catechin units, and as more condensed polymers. The importance of condensation/polymerisation rests with their high antioxidant activity compared with the equivalent non-condensed monomers.

Grape seed tannins have potent antioxidant activity in both aqueous and lipophilic environments.

Testing Standards

Tarac Technologies test in accordance with industry standards against:

- Agro chemicals – pesticides, metals and contaminants
- HPLC, LC/MS and standardised assays used to verify polyphenolic content and structure
- Microbiological status