

## **Ingredient Rationale: Proanthozone®**

**Bioflavanol** – Bioflavanol, a plant polyphenol with oligomeric proanthocyanidin is an important free radical scavenger. It is one of the strongest antioxidants. It is very bioavailable, with traces appearing in the saliva within an hour after ingestion. Protects the health of your pet's organs, including the liver, kidneys, pancreas, digestive system and heart. The bioflavanol helps bridge the gap between broken collagen fibers, helping support flexibility in connective tissue. It nutritionally supports the health of the circulatory system by strengthening the walls of blood vessels, providing better nutrient delivery to cells.

**Manganese** – Manganese serves as an antioxidant as part of a manganese-based superoxide dismutase. It is essential for the incorporation of essential sugars into the mucopolysaccharides (elastic connective tissues and lubricating fluids in the body) and is needed in the metabolism of fatty acids and cholesterol.

**Zinc** – An antioxidant necessary for supporting the body's healing function, essential for the synthesis of bone tissue, for healthy skin, and for immunity. It has been depleted in our agricultural soils over the years because it was not recognized as being of great importance until it was too late. Supplementation is important to achieve optimum intake.

**Selenium** – Selenium is a well-researched nutrient which has been identified as an essential component of the antioxidant enzyme glutathione peroxidase. This is one of the triumvirate of enzymes within the cell along with Superoxide dismutase (S.O.D.) and catalase which are continually required to disarm active forms of oxygen (free radicals) generated during the oxidative, energy producing cycles within the cell.

**Vitamin A** – Vitamin A possesses free radical scavenging capabilities. It provides maturation, tissue building and immune boosting nutritional support to your pet's body.

**Vitamin E** – Vitamin E is a well-established, heavily researched antioxidant essential to the survival of cell membranes. It blocks cross-linking of cell membranes and thus helps preserve cellular vitality. It supports immune response.

**Cysteine** – An essential, sulfur containing amino acid. It works synergistically with glutathione in the liver to detoxify harmful chemicals or metals that can damage cells throughout the body. Supports healthy cell function in nerve tissue, the brain, and the immune system. Many of the metals are also pro-oxidants which accelerate aging. Cysteine helps "pull them out" before they can damage vital tissue.

**Glutathione** – Glutathione is a peptide containing three amino acids produced by the body. It is found in every cell of the body and protects cells in many ways. It neutralizes oxygen molecules before they can harm cells as free radicals. It combines with selenium to form the enzyme, glutathione peroxidase, which neutralizes hydrogen peroxide (dangerous to the cells). Many studies and articles have been published about its essential role in defending both human and animal cells in the body. The most universal cause of glutathione deficiency is ageing. As the body ages, it either produces less, or it gets used up faster. Nature provides only small amounts in food, and the major source is what the body produces itself. Supplementation with glutathione is important, especially for older animals coping with a lifetime of accumulated free radical damage.