The polymerized fraction from bilberry with proven efficiency.

**WHAT IS CATOCYANIC COMPLEX®**

Catocyanic Complex® is an active polymerized fraction extracted from bilberry composed of aglycon cyanidins, delphinidine, malvidine and peonidine.

**A CLINICALLY PROVEN ACTION ON THE EYE**

Catocyanic Complex® has been extensively studied with proven action on:

1. **RETINOPATHIES**
2. **CAPILLARY PERMEABILITY**
3. **REGENERATION OF THE RHODOSPINE AND RETINAL PURPURA**
4. **MYOPIA**
5. **NIGHT VISION**
HEALTH BENEFITS

ACTION ON RETINOPATHIES
Eye disease is common in diabetes, and one complication is diabetic retinopathy. Non proliferative retinopathy can include venous abnormalities, microaneurism, retinal hemorrhages, retinal oedemas and exudates. In a clinical study (1) 31 patients with various types of retinopathy were investigated with regard to the effect of anthocyanosides on the retinal vessels. A beneficial effect on the permeability was observed, particularly in patients with diabetic retinopathy. Another study (2), where 266 patients with diabetic retinopathy were treated with 400 mg/day for 1 year, showed a positive effect on retinopathy, in particular when treatment started at an early stage of the disease.

ACTION ON CAPILLARY PERMEABILITY
A thickening of the capillary basal membrane can lead to an abnormal increase in capillary permeability, hence to tissue edema, in several disorders.
Extracapillary leakage of fluids and plasma proteins is an important feature of diabetic microangiopathy, and Catocyanic Complex® has been shown to inhibit this disease mechanism. This was confirmed in comparative study in diabetic rats (3). Other studies (4-5) highlighted Catocyanic Complex® beneficial role in rebalancing capillary permeability linked pathologies.

ACTION ON THE REGENERATION OF THE RHODOSPINE
The eye works in a simple way: it receives light via specialized nerve cells, called rhodospine and cones, that change light into nerve impulses that travel through the optic nerve to the visual area of the brain where the impulses are processed accordingly so that we may see. Several studies have shown that Catocyanic Complex® is beneficial in the regeneration of rhodospine (6).

ACTION ON MYOPIA
Clinical studies showed the progression of medium myopias after the intake of Catocyanic Complex®, may be reduced by 50%. This active ingredient represents thus a contribution to the prevention of severe myopia with its feared complications (7-8).

EXTRACTION PROCESS
Thanks to a natural friendly fermentation process (No added SO2) the nutritive and active properties of the compound are preserved. Accurate chemicals, physical and microbiological tests are performed in house according to pharmacopeias and cGMP. Our unique extraction process allows the genins to polymerise together, cutting out the molecule of sugar. For this reason, the final compound is particularly suitable for diabetic needs.
ACTION ON NIGHT VISION

Poor night and twilight vision is a major problem, particularly on the roads. For people suffering from this type of disorder, the risk of accident substantially increases at night. Older drivers, in particular, suffer from limited visual sharpness. However, even for people with normal visual sharpness, the glare from an oncoming car’s headlights cause adaptation problems for 3 to 5 minutes. Furthermore, fatigue can reduce ocular capacity and light perception.

Catocyanic Complex® is effective in the improvement of night vision and adjustment to darkness due to its ability to increase the regeneration of the rhodopsine, a purple pigment essential for helping the rods in the eyes to adapt to light and dark. Catocyanic Complex® is the legendary and original active ingredient tested on the Royal AirForce pilots.

A POWERFUL ANTI OXIDANT: ACTION ON LDL OXIDATION

Oxidative modifications of low density lipoproteins (LDL) are now recognized as one of the major processes in atherogenesis. Various drugs, as well as a number of natural products, have been proposed to inhibit such processes. Among the naturally-occurring constituents of plants which appear to possess antioxidant activity are polyphenolic compounds such as flavonoids. Catocyanic Complex® is particularly rich in such molecules. In 1997 a study performed on Catocyanic Complex®, confirmed the antioxidative activity of this extract on human LDL. Calculation of IC50 values indicates that, on a molar bases, this extract may be more potent than either ascorbic acid or butylated hydroxytoluene in the protection of LDL particles from oxidative stress.

REFERENCES