



Scientific information

Plandai's technology enables it to produce complexes of phytonutrients from live green tea leaf, and other live plant materials, in a stable and clinically proven, highly bioavailable form. The process combines the mechanisms of cavitation and sonoluminescence (the emission of short bursts of light from imploding bubbles in a liquid when excited by sound) which freely releases the phytonutrients in a stable emulsion and from which the valuable botanical complex are extracted.

Dietary polyphenols are a main source of antioxidants in humans and have a variety of biological activities ranging from antiaging and anticancer to the lowering of blood cholesterol levels and improving bone strength.

A large body of evidence mainly derived from preclinical studies in animals has concluded that dietary polyphenols when given in large quantities can have desirable outcomes. In addition poor bioavailability of polyphenols makes it more difficult to conduct relevant clinical studies because large exposure differences occur between participants and where oral bioavailability is between 2-10%.

Polyphenols are hydrophilic and are typically glycosides and usually too polar or too large to penetrate the intestinal membrane. Instead these glycosides often need the action of intestinal or microfloral enzymes to release sugar so the polyphenols are more available in the aglycon form. However the bioavailability is very low because pure aglycon forms have very poor solubility

Plandai science and technology has overcome these challenges and produces a highly bioavailable complex of polyphenols having crossed the pharmaceutical barriers of dosage, particle size, solubility, permeability, metabolism, excretion and target uptake.

Reference published Plandai Studies

- Effects Plandai process on extraction of carotenoids Food chemistry 132(2012) 1156-60 – (The science of changing the stereoisomeric profile of live plant of cis and trans isomers) - USDA Albany California
- NW University Drug Development Platform, Potchefstroom, South Africa - Bioavailability clinical study June 2015)

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