



hermes consilium



portfolio.

clinically
supported
ingredients





INDICATIONS
ENERGY SUPPORT
SPORT NUTRITION

NEWCAFF™

microcapsules

novel caffeine delivery system which has been designed to mask the bitter taste of caffeine and provide sustained release

- **supplier**
Lipofoods
- **product grade**
granulated powder suitable for powder blends, bars, gels, chewables, milkshakers and different kind of dietary supplements
- **daily dose**
up to 200 mg caffeine per day
- **stability**
24 months shelf life
- **certifications**
Halal



advantages:

- clean non-bitter taste
- **controlled release**
helps to avoid caffeine crash few hours after intake
- high caffeine concentration
- cleaner formulas

mechanisms of action:

- caffeine is a central nervous system stimulant
- **improves alertness, memory**, decreases fatigue, improve mental performance





Internal study:

- Overcoming caffeine bitter taste while providing its sustained release via microencapsulation, 2017:
 - **In vitro release profile:** microencapsulated caffeine showed a good retention and an improved in vitro sustained release profile when compared with unencapsulated caffeine
 - **Sensory analysis:** masking of the bitter taste of powdered caffeine coated with lipids



product examples





INDICATIONS
ENERGY SUPPORT
COGNITIVE HEALTH
SPORTS NUTRITION
STRESS MANAGEMENT

MAGSHAPE™
microcapsules

highly concentrated microencapsulated magnesium source for products effective at restoring and maintaining a healthy level of this mineral in human cells and bones

- **supplier**
Lipofoods
- **product grade**
powder suitable for capsules, tablets, chewables and orosoluble powder products
- **daily dose**
Recommended Daily Allowance (RDA) for magnesium in the European Union is 375 mg
- **stability**
18 months shelf life
- **certificates**
Halal, Kosher, Vegetarian, Vegan

advantages:

- **highly concentrated magnesium (30%)**
- **microencapsulation technology** provides improved flowability and compressibility
- **in vitro results show relaxation effect on the nervous transmission**
inhibits release of neurotransmitter noradrenaline
- **improves muscular function thanks to relaxation**
the muscle relaxes more quickly

mechanisms of action:

magnesium contributes to:

- **reduction** of tiredness and fatigue
- **electrolyte** balance
- **normal functioning of the nervous system** and psychological function
- **normal muscle function** and normal energy-yielding metabolism
- **maintenance of normal bones and teeth**
- **has a role in the process** of cell division



Turmacin™

water-soluble composition from turmeric (*Curcuma longa*), standardized to bioactive polysaccharides called 'turmerosaccharides' and without curcuminoids

- **supplier**
Natural Remedies
- **product grade**
powder suitable for shots, tablets, lozenges, spray, gummies, biscuits, capsules, candies, creams
- **daily dose**
500-1000 mg
- **stability**
24 months shelf life
- **certificates**
non-GMO Project verified, clean label, Kosher, Halal



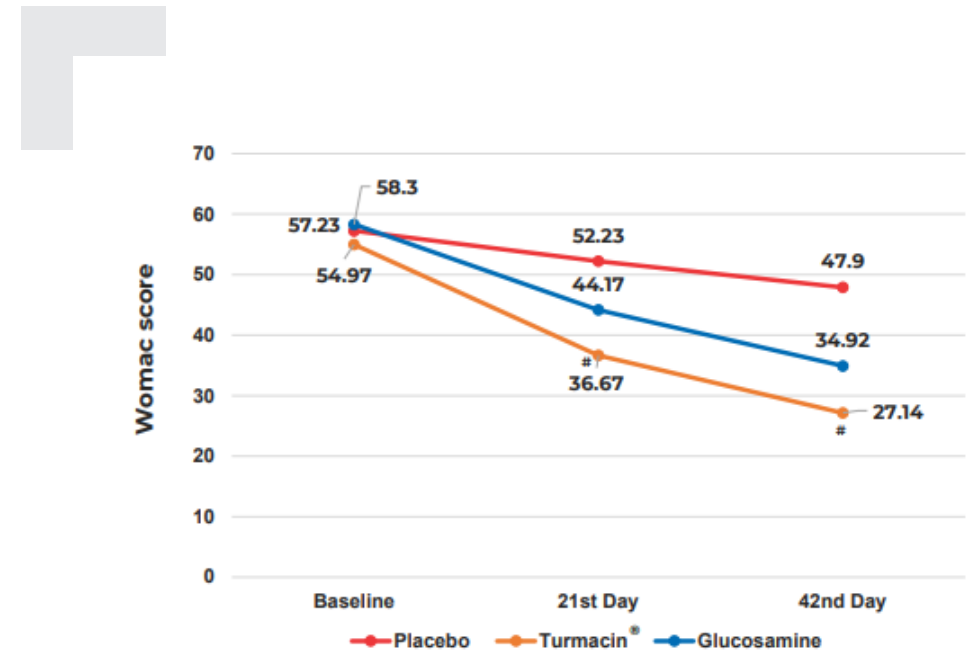
INDICATIONS
JOINT HEALTH
ANTI-INFLAMMATORY SUPPORT
SPORTS NUTRITION

advantages:

- **first turmeric ingredient** not based on curcuminoids
- **water-soluble**
naturally bioavailable, no need to further improve absorption like with standard turmeric extracts
- **water-extracted turmeric product**
no use of solvents
- **clinically researched and supported**
5 clinical studies
- **powerful anti-inflammatory activity**
reduces pain severity by 50% in 3 hours
- **significantly improves joint pain, stiffness and function**
based on the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score (graph on the right) - compared to glucosamine and placebo
- **patented composition**

mechanisms of action:

- **reduces production of inflammatory mediators**, reactive oxygen species (ROS) and collagen degradation markers
- **increases synthesis of collagen**, proteoglycans and anti-inflammatory cytokines
- **reduces cartilage damage** and ageing of cartilage cells



clinical studies:

- Madhu et al., 2012: Safety and efficacy of *Curcuma longa* extract in the treatment of painful knee osteoarthritis: a randomized placebo-controlled trial
naturally bioavailable, no need to further improve absorption like with standard turmeric extracts
- Calderon-Perez et al., 2020: Acute effects of turmeric extracts on knee joint pain: a pilot, randomized controlled trial (finished product)
- Raj et al., 2020: Effect of Turmacin supplementation on joint discomfort and functional outcome among healthy participants – A randomized placebo-controlled trial
- Wang et al., 2020: Effectiveness of *Curcuma longa* extract for the treatment of symptoms and effusion–synovitis of knee osteoarthritis, A randomized trial
- Selvi et al., 2020: Safety of NR-INF-02, an extract of *Curcuma longa* containing turmerosaccharides, in healthy volunteers: a randomized, open-label clinical trial

pre-clinical studies:

- Chandrasekaran et al., 2013: Safety evaluation of turmeric polysaccharide extract: assessment of mutagenicity and acute oral toxicity
- Chandrasekaran et al., 2013: Immune-stimulatory and anti-inflammatory activities of *Curcuma longa* extract and its polysaccharide fraction
- Illuri et al., 2015: Anti-inflammatory activity of polysaccharide fraction of *Curcuma longa* extract (NR-INF-02)
- Bethapudi et al., 2017: Bioactive turmerosaccharides from *Curcuma longa* extract (NR-INF-02): Potential ameliorating effect on osteoarthritis pain



product examples





INDICATIONS

METABOLISM AND ENERGY SUPPORT
WEIGHT MANAGEMENT
SPORTS NUTRITION

Capsimax

highly active, natural capsicum extract from red hot chili peppers (*Capsicum annum*) that delivers all the heat of capsaicin without the burn

- **supplier**
OmniActive
- **product grade**
powder suitable for tablets, capsules, powder formulations
- **daily dose**
2-10 mg/day of capsaicinoids (100-500 mg of Capsimax)
- **stability**
36 months shelf life, maximum pH 4
- **certificates**
Vegetarian, Vegan, Kosher, Halal

advantages:

- **patented OmniBead™ technology**
- **small dose**
- **multiple clinical studies** supporting its role in effective weight management
- **targets several key areas of weight management**
 - boost metabolism (increases resting energy expenditure and burning calories)
 - increases lipolysis (breakdown of fat stores to release free fatty acids)
 - promotes satiety (significantly decreases appetite)
- **improves waist/hip ratio**
- **stimulant-free and safe**
showing no impact on heart rate, blood pressure or catecholamines (adrenaline, noradrenaline)
- **awards**
2009 SupplySide Scientific Excellence Award;
2011 Most Innovative Ingredient by NBT magazine

mechanisms of action:

Proposed mechanism:

activation of the nervous system

receptors in the brain



production of noradrenaline and adrenaline



breakdown of fats in fat tissue



increased free fatty acids activate specific thermogenic proteins



hydrogen ions flood mitochondria, producing heat



this turns mitochondria into “heat pumps” to burn off excess fatty acids

clinical studies:

- Ryan et al., 2009: Acute effects of a thermogenic nutritional supplement on energy expenditure and cardiovascular function at rest, during low-intensity exercise, and recovery from exercise
- Bloomer et al., 2010: Effect of oral intake of capsaicinoid beadlets on catecholamine secretion and blood markers of lipolysis in healthy adults: a randomized, placebo controlled, double-blind, cross-over study
- Lopez et al., 2013: Eight weeks of supplementation with a multi-ingredient weight loss product enhances body composition, reduces hip and waist girth, and increases energy levels in overweight men and women
- Deshpande et al., 2016: Tolerability of capsaicinoids from *Capsicum* extract in a beadlet form: a pilot study
- Deng et al., 2017: Capsaicinoids enhance metabolic rate in normal healthy individuals using a novel metabolic tracker breezing device-an open label placebo controlled acute study
- Urbina et al., 2017: Effects of twelve weeks of capsaicinoid supplementation on body composition, appetite and self-reported caloric intake in overweight individuals
- Morde et al., 2021: Capsimax increases resting energy expenditure in males under fasting state: a randomized, double-blind, placebo controlled, cross-over study

pre-clinical studies:

- Sahin et al., 2018: Capsaicinoids improve consequences of physical activity
- Mariwala et al., 2020: Accumulating evidence to support the safe and efficacious use of a proprietary blend of capsaicinoids in mediating risk factors for obesity

product examples



Standardized extract of purified *Shilajit* from the pristine Himalayas, used in Ayurvedic medicine as a rejuvenator. It is formed for centuries by the gradual decomposition of certain plants by the action of microorganisms.

- **supplier**
Natreon
- **product grade**
powder suitable for capsules, stick packs, sachets
- **daily dose**
from 200 mg per day
- **stability**
60 months shelf life; hygroscopic, should be protected from moisture
- **certificates**
Kosher, Halal, Vegetarian, non-GMO project verified, not Novel Food in EU when used as or in food supplements



INDICATIONS

FERTILITY
SKIN HEALTH & BEAUTY
SPORTS NUTRITION

advantages:

- **water soluble**
- **rich in fulvic acid and minerals**
- **standardized to $\geq 50\%$ fulvic acid** which enhances bioavailability of microminerals
- **clinical support for fertility (improved sperm quality), testosterone boost, muscle strength, energy boost**
- **shown to improve** skin health in women
- **boosts** mitochondrial energy
- **biome optimized Shilajit™**
sourced from distinct biological ecosystems and processed using environmentally friendly extraction to achieve an optimal nutrient profile

mechanisms of action:

- **adaptogenic**, nootropic action
- **increased** testosterone levels
- **improved sperm count** and motility
- **increased exercise endurance** and overall fitness level by increasing ATP levels
- **retained muscular strength** after exercise fatigue
- **reduced inflammatory marker** hsCRP
- **improved skin micro perfusion** for radiant skin
- **induced genes for synthesis of collagen** and other extracellular matrix proteins in the skin
- **supported endothelial function** by increasing nitric oxide levels



clinical studies:


Men's health & fertility:

- Biswas et al., 2009: Clinical evaluation of spermatogenic activity of processed Shilajit in oligospermia
- Pandit et al., 2015: Clinical evaluation of purified Shilajit on testosterone levels in healthy volunteers

Muscle support:

- Das et al., 2016: The human skeletal muscle transcriptome in response to oral shilajit supplementation
- Keller et al., 2019: The effects of Shilajit supplementation on fatigue-induced decreases in muscular strength and serum hydroxyproline levels

Skin health:

- Das et al., 2018: Skin transcriptome of middle-aged women supplemented with natural herbo-mineral Shilajit shows induction of microvascular and extracellular matrix mechanisms
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Bone health:

- Evaluation of the effect of an aqueous extract of Shilajit on bone health in post-menopausal women – A randomized, double-blind, placebo-controlled clinical study (unpublished)
- Study of Shilajit (PrimaVie®) in modifying cardiovascular risk with special reference to endothelial dysfunction in patients with Type2 Diabetes Mellitus (unpublished)

product examples



Crominex[®] 3+

Chromium: Safety & Efficacy



INDICATIONS

BLOOD SUGAR MANAGEMENT
CARDIOVASCULAR HEALTH

unique trivalent chromium ingredient – prepared by complexing Cr³⁺ with *Phyllanthus emblica* (Capros[®]) and Shilajit (PrimaVie[®])

- **supplier**
Natreon
- **product grade**
powder
- **daily dose**
from 200 mcg/day (containing 4 mcg Cr³⁺),
100% RDA for Cr is 40 mcg
- **stability**
60 months shelf life
- **certificates**
Kosher and Halal, Vegetarian, non-GMO

advantages:

- **complexation increases bioavailability** and minimizes the conversion of Cr³⁺ to toxic Cr⁶⁺
- **water soluble** and stable
- **backed by clinical studies**
- **enhanced bioavailability**
- **small dosage**

mechanisms of action:

- **reduces HbA1C**
measure of average blood sugar levels for the last 2-3 months
- **reduces marker of inflammation hsCRP,**
improves lipid profile by reducing LDL, supports healthy endothelial function by increasing nitric oxide & glutathione
- **chromium contributes to the maintenance of normal blood glucose levels** and is involved in regulation of insulin action

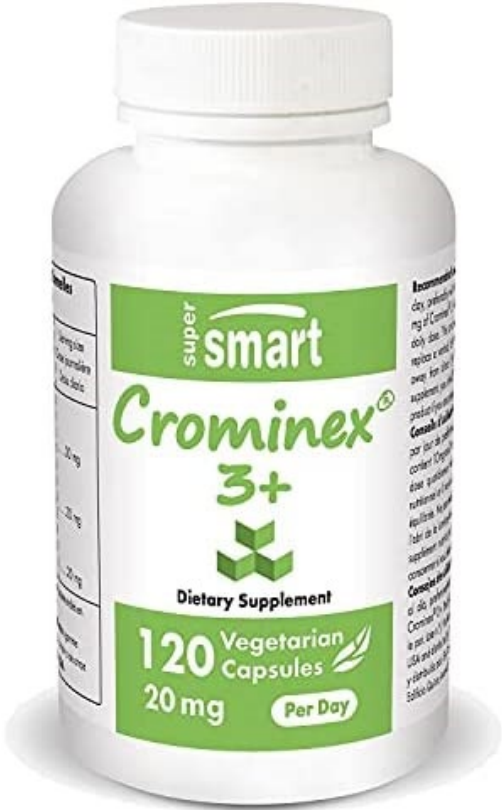


clinical studies:

- **Biswas et al., 2010: Effects of adjunct therapy of a proprietary herbo-chromium supplement in type 2 diabetes: A randomized clinical trial** (herbo-chromium complex in combination with oral antidiabetic drugs improves overall diabetic complications)
- **Usharani et al., 2017: Effect of proprietary chromium complex and its individual components versus chromium picolinate, chromium polynicotinate and chromium dinicocysteinate on endothelial function, biomarkers and lipid profile in type 2 diabetics - a randomized, double-blind, placebo-controlled study**
- **Pingali et al., 2020: Evaluation of the effect of fish oil alone and in combination with a proprietary chromium complex on endothelial dysfunction, systemic inflammation and lipid profile in Type2 Diabetes Mellitus–A randomized, double-blind, placebo-controlled clinical study** (improves the efficacy of fish oil in addressing cardiovascular risk factors compared to fish oil given alone)



product examples





super antioxidant from the edible fruits of *Terminalia chebula*, an ancient Ayurvedic plant, with clinically proven benefits for joint and cardiovascular health

- **supplier**
Natreon
- **product grade**
powder suitable for solid or liquid dosage forms
- **daily dose**
500-1000 mg
- **stability**
36 months shelf life
- **certificates**
Kosher, Halal, Vegetarian, Vegan

INDICATIONS

JOINT HEALTH
ANTI-INFLAMMATORY SUPPORT
CARDIOVASCULAR HEALTH

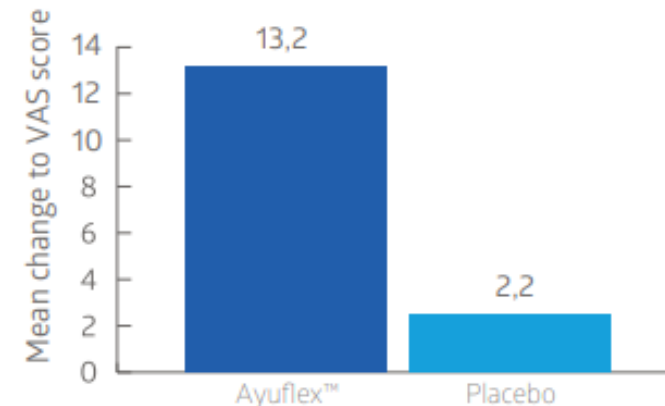
advantages:

- **highly clinically supported**
7 clinical studies
- **tested in patients with osteoarthritis**, but also in healthy subjects – effective in both populations
- **vegetarian alternative** to animal chondroitin/glucosamine
- **lower dose compared to typical joint health ingredients**
convenient for various formulations
- **not problematic for production** – no strong color which stains the equipment like curcumins
- **patented**
- **water soluble**
- **aqueous extraction process**

mechanisms of action:

- **decreases oxidative stress**, inflammation (hsCRP) and cartilage damage
- **analgesic activity**, improves acute discomfort
- **improves knee pain**, stiffness and disability
- **supports endothelial function** by improving nitric oxide and glutathione

Figure 1: Mean VAS score changes to discomfort during activity or exercise over 84 days



clinical studies:

Joint health, analgesic activity:

- Kumar et al., 2015: Evaluation of the analgesic activity of standardized aqueous extract of *Terminalia chebula* in healthy human participants using hot air pain model
- Pokuri et al., 2016: A randomized, double-blind, placebo-controlled, cross-over study to evaluate analgesic activity of *Terminalia chebula* in healthy human volunteers using a mechanical pain model
- Lopez et al., 2017: Effects of dietary supplementation with a standardized aqueous extract of *Terminalia chebula* fruit (AyuFlex®) on joint mobility, comfort, and functional capacity in healthy overweight subjects: a randomized placebo-controlled clinical trial

Cardiovascular health:

- Kishore et al., 2016: A study of *Terminalia chebula* extract on endothelial dysfunction and biomarkers of oxidative stress in patients with metabolic syndrome
- Study of *Terminalia chebula* 250mg, 500mg and placebo in modifying cardiovascular risk with special reference to endothelial dysfunction in patients with Type2 Diabetes Mellitus (unpublished)



product examples



ACTAZIN[®]

natural powder from 100% New Zealand-grown green kiwifruit (*Actinidia chinensis var. deliciosa*) for bowel regularity support

- **supplier**
Anagenix
- **product grade**
powder suitable for capsules, tablets, powder forms, sachets, bulk powder blends, gummies
- **daily dose**
600 mg
- **stability**
30 months shelf life
- **certificates**
non-GMO project verified, Kosher



INDICATIONS
GUT HEALTH
BOWEL IRREGULARITY
DIGESTIVE DISCOMFORT

advantages:

- **clinically assessed** digestive health ingredient
- **FODMAP-friendly**
- **multiple format applications**
- **small dosage**
- **proprietary processing** retains high levels of key nutrients and bioactives
- **rich in soluble and insoluble fibers**, as well as enzyme actinidin
- **preservative-, sugar-, and gluten-free**
- **clinically supported combination** with Livaux®

mechanisms of action:

- **high fiber content**, promotes regularity, increases the rate of gastric emptying
- **reduces bloating**, gastric discomfort and constipation
- **contains enzyme actinidin** to help with protein digestion
- **prebiotic activity**, supports production of short chain fatty acids (SCFA)



clinical study:

- **Ansell et al., 2015: Kiwifruit-derived supplements increase stool frequency in healthy adults: a randomized, double-blind, placebo-controlled study**
 - While the number of stools increased, their form was not affected – Actazin® did not induce loose stools

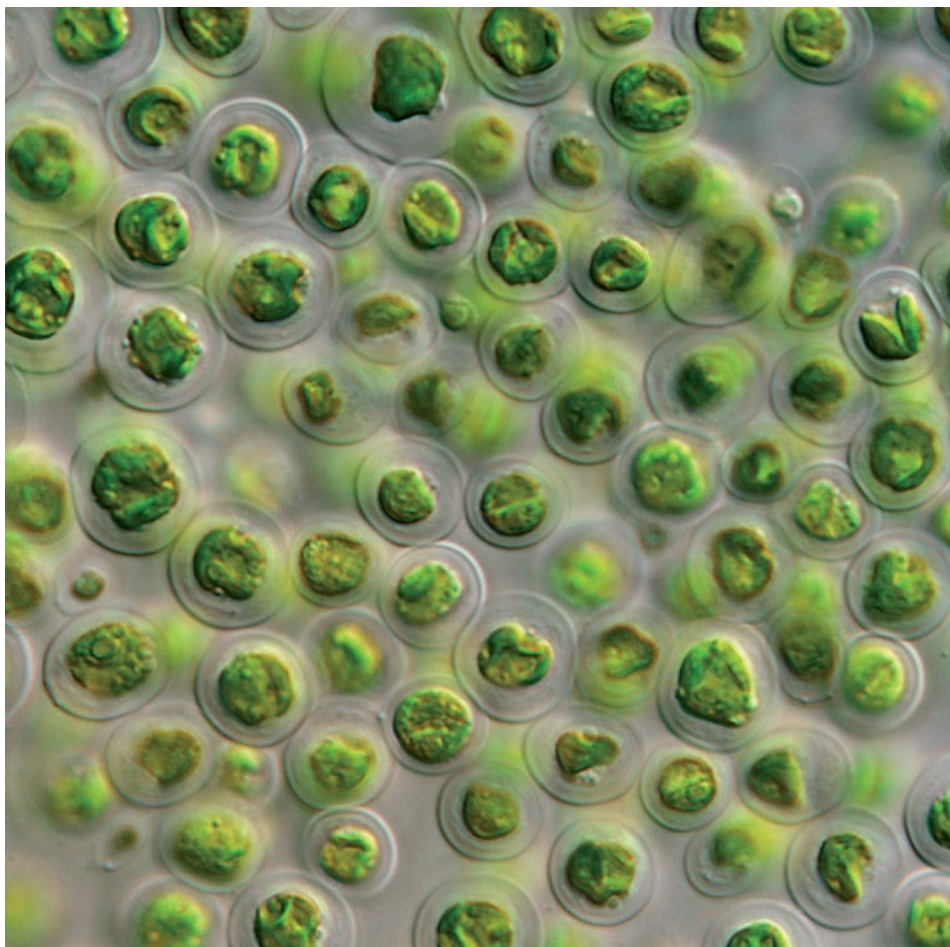
pre-clinical studies:

- **Duysburgh et al., 2019: A synbiotic concept containing spore-forming Bacillus strains and a prebiotic fiber blend consistently enhanced metabolic activity by modulation of the gut microbiome in vitro**
 - Fructooligosaccharides (FOS) from kiwifruit in combination with other prebiotics influenced microbial activity and composition in vitro, and enhanced butyrate production
- **internal in vitro study: Prebiotic effects of Actazin in vitro – microbial growth**
 - Actazin® supported the growth of probiotic strains, but not pathogenic bacteria



product examples





healthy functional marine ingredient from microalgae *Tetraselmis chuii*, rich in superoxide dismutase or SOD - one of the body's most powerful natural antioxidant enzymes

- **supplier**
Fitoplancton Marino
- **product grade**
powder form
- **daily dose**
25 mg
- **stability**
36 months shelf life
- **certificates**
approved Novel Food status in EU, Vegan

INDICATIONS

ANTI-OXIDATIVE SUPPORT
SPORTS NUTRITION
SKIN HEALTH & AND BEAUTY
HEALTHY AGEING
FERTILITY

advantages:

- **much more than a typical SOD ingredient**
contains other crucial antioxidative enzymes (glutathione peroxidase and catalase)
- **rich in naturally present nutrients from the cell**
essential fatty acids, vitamins, minerals, amino acids, and pigments
- **clinically tested**
- **small dose allows flexibility in formulations**
- **versatile ingredient**
suitable for many indications linked to oxidative stress
- **stable at high temperatures**
no need for coating or microencapsulation
- **produced by sustainable patented technology**

mechanisms of action:

- **antioxidant and anti-inflammatory action,**
oxidative stress reduction
- **SOD provides the first shield** against oxidative stress and damage in the body
- **induces other primary antioxidant enzymes** ((glutathione peroxidase and catalase)
- **activates genes** for antioxidant protection in human cells
- **improves performance** during stress tests and decreases lipid peroxidation in athletes



clinical study:

- **Bellido et al., 2017: Effects of *Tetraselmis chuii* intake on oxidative stress in athletes**

(improved performance, strong antioxidant effect: decreased lipid peroxidation, increased vitamin E levels in erythrocytes in plasma, increased O₂ consumption)

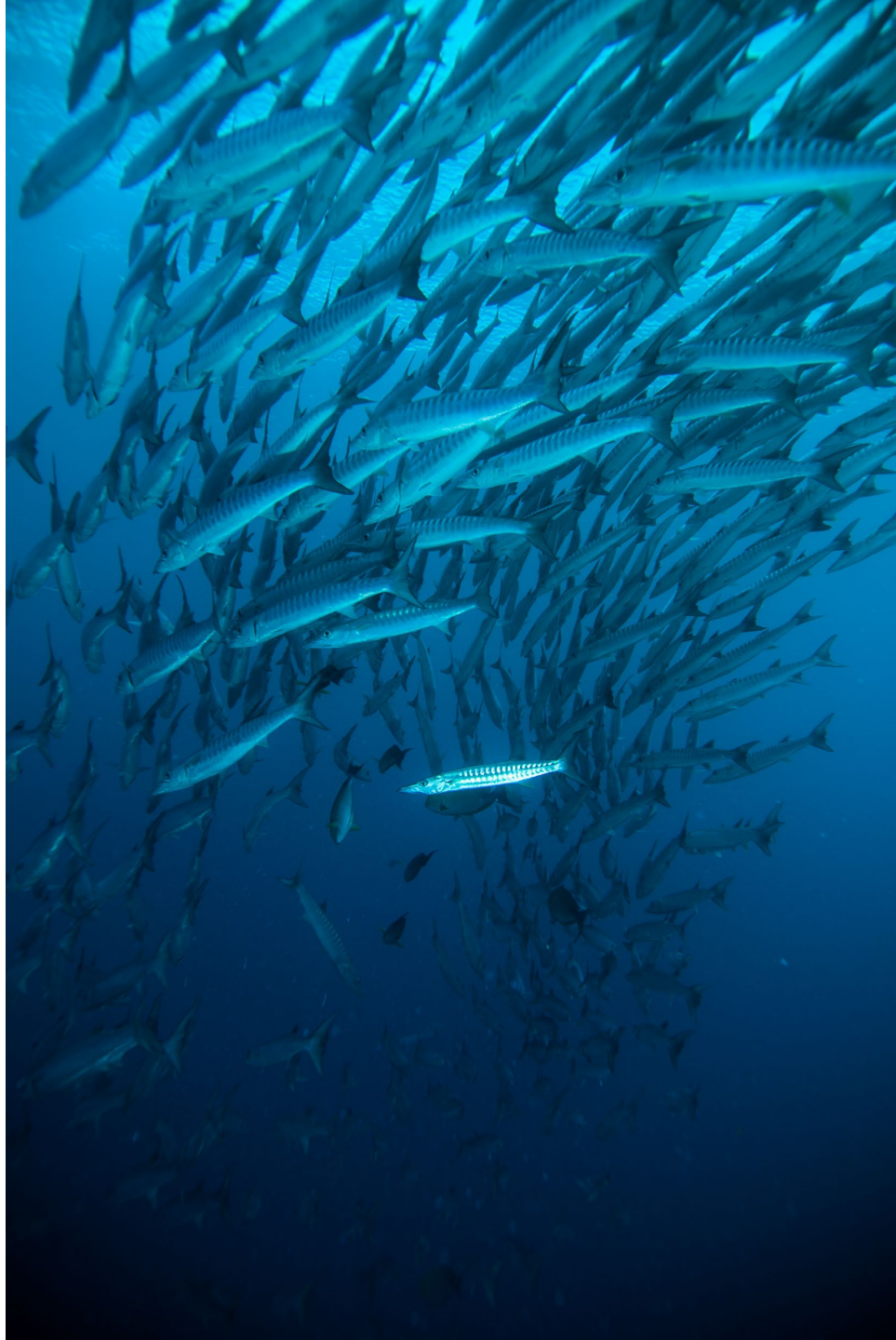
pre-clinical studies:

- **Mantecon et al., 2019: Safety assessment of a lyophilized biomass of *Tetraselmis chuii* (TetraSOD®) in a 90 day feeding study**
- **Ramirez et al., 2020: TetraSOD® activates the antioxidant response pathway in human cells: An in vitro approach**



product examples





hydrolyzed marine collagen from fish cartilage for joint health and skin support with a synergetic action of its components

- **supplier**
Abyss Ingredients
- **product grade**
powder suitable for tablets, capsules, sticks, liquid, soft gels and liquid form which needs to be shaken)
- **daily dose**
1 g
- **stability**
36 months shelf life
- **certificates**
Halal

INDICATIONS

JOINT HEALTH
SKIN HEALTH & BEAUTY

advantages:

- **synergistic action of collagen proteins (type II)** and glycosaminoglycans (chondroitin sulfate, glucosamine sulfate, hyaluronic acid).
- **highly digestible** low molecular weight peptides
- **gentle eco-friendly** water extraction
- **synergetic effects** for joint health
- **supported by clinical** and pre-clinical evidence

mechanisms of action:

- **collagen hydrolysate is absorbed intestinally** and accumulated in the cartilage
- **components provide structural molecules** and can stimulate the production of own collagen for healthy joints and skin
- **pain reduction** and mobility improvement



clinical studies:

- Maia Campos et al., 2021. Oral supplementation with hydrolyzed fish cartilage improves the morphological and structural characteristics of the skin: a double-blind, placebo-controlled clinical study
- **internal study: Clinical study in adult population with moderate knee joint discomfort and loss of functionality** (an exploratory, non-comparative, multi-centric trial): Cartidyss® significantly improves global knee function, reduces joint discomfort, has a significant impact on quality of life

pre-clinical study:

- Henrotin et al., 2021: Oral supplementation with fish cartilage hydrolysate accelerates joint function recovery in rat model of traumatic knee osteoarthritis



product examples



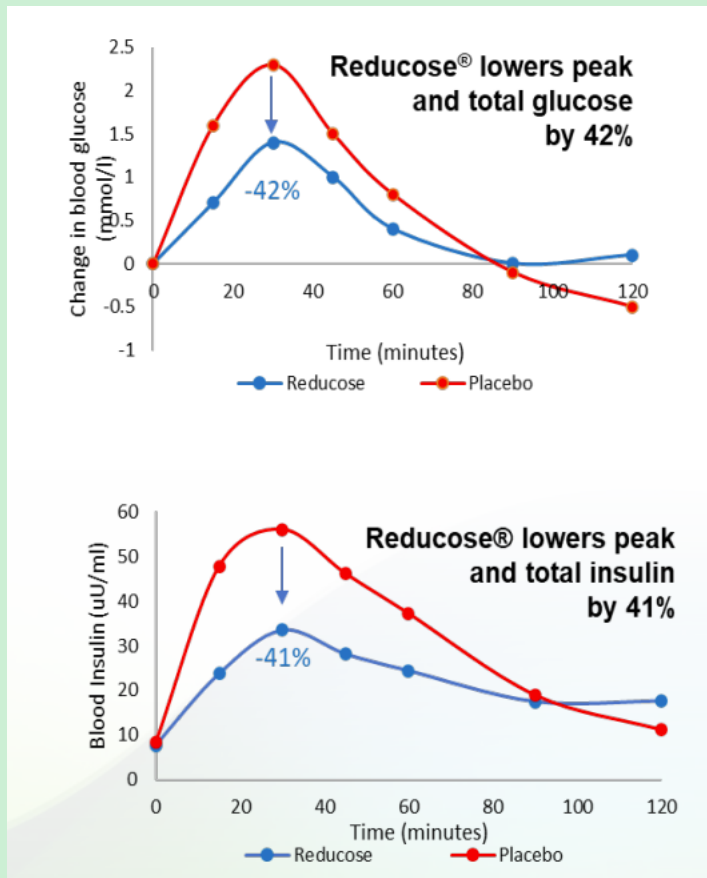


proprietary mulberry (*Morus alba*) leaf extract,
turns fast sugars and other carbs into slow ones

- **supplier**
Phynova
- **product grade**
powder suitable for tablets, capsules, soft melts, foods (baked goods, bars, fortified rice, congee), beverages (RTD beverages...)
- **daily dose**
200-250 mg
- **stability**
30 months shelf life
- **certificates**
Halal, Kosher, vegetarian, non-GMO



INDICATIONS
BLOOD SUGAR MANAGEMENT

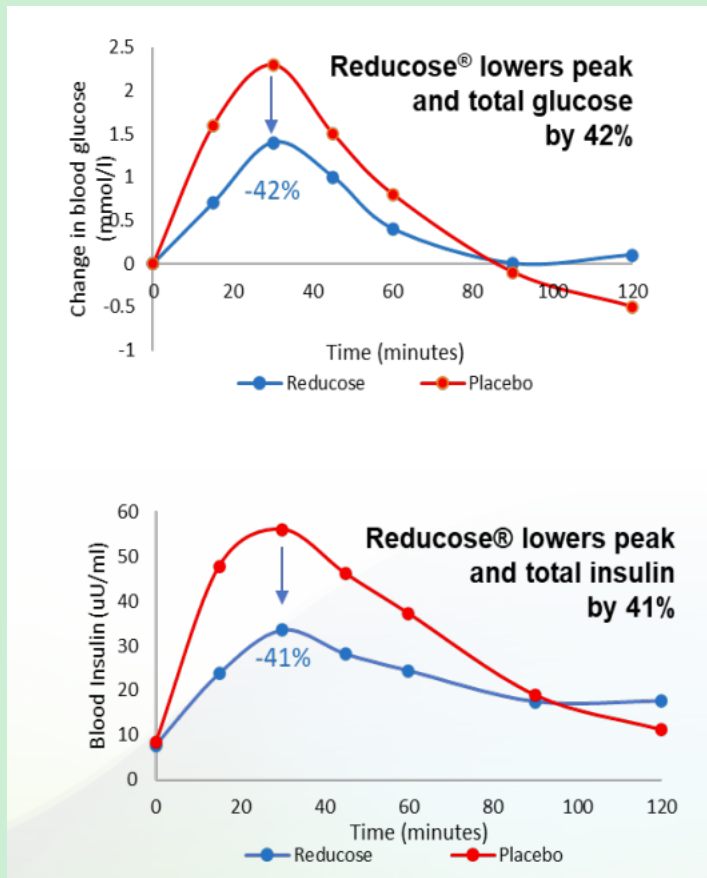


advantages:

- **patented, unique & natural water extract** for healthy blood glucose with immediate effect
- **clinically proven ~ 40% reduction** in post-meal blood glucose and insulin response
- **unlike typical carb-blockers**, prevents absorption of a wide range of carbohydrates
- **reduced cravings** and feeling of hunger
- **undigested carbs feed the good bacteria**

mechanisms of action:

- **contains 1-deoxynojirimycin** (structurally similar to D-glucose) which inhibits intestinal α -glucosidase enzymes, responsible for breakdown of carbohydrates before absorption
- **adding Reducose® to a meal lowers the glycemic index** of the food and lowers the postprandial blood glucose response, as it stops the carbohydrates from being digested
- **Reducose® is normally absorbed and excreted** unmetabolized after its action



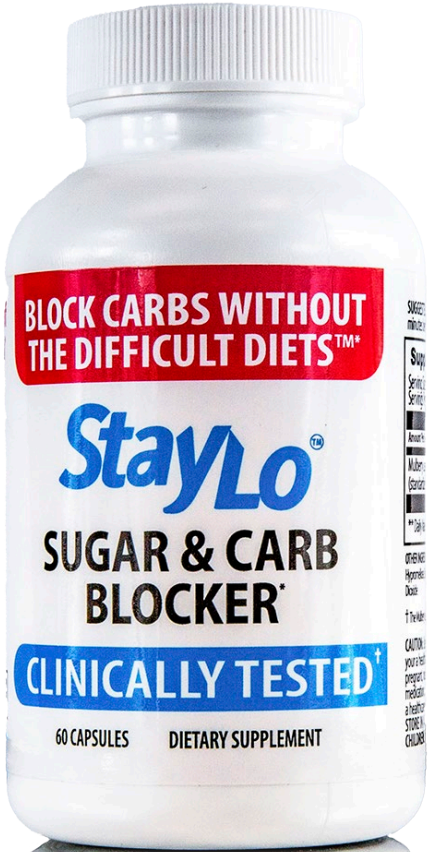
clinical studies:

- Lown et al., 2015: Mulberry extract to modulate blood glucose responses in normoglycaemic adults (MULBERRY): study protocol for a randomised controlled trial
- Lown et al., 2017: Mulberry-extract improves glucose tolerance and decreases insulin concentrations in normoglycaemic adults: Results of a randomised double-blind placebo-controlled study
- Wang et al., 2018: Mulberry leaf extract reduces the glycaemic indexes of four common dietary carbohydrates (Co-consumption of Reducose with sucrose, maltose, or maltodextrin can reduce the GI values of these carbohydrates)
- Thondre et al., 2021: Mulberry leaf extract improves glycaemic response and insulaemic response to sucrose in healthy subjects: results of a randomized, double blind, placebo-controlled study

pre-clinical study:

- Liu et al., 2016: Prevention Effects and Possible Molecular Mechanism of Mulberry Leaf Extract and its Formulation on Rats with Insulin-Insensitivity

product examples





hermes consilium

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