

# **NANO LIPOSOMAL DIETARY SUPPLEMENTS**

## **MONO-FORMULATIONS**

**CAPSULES #0 / TABLETS 1000 MG**



**SUPREME**  
PHARMATECH



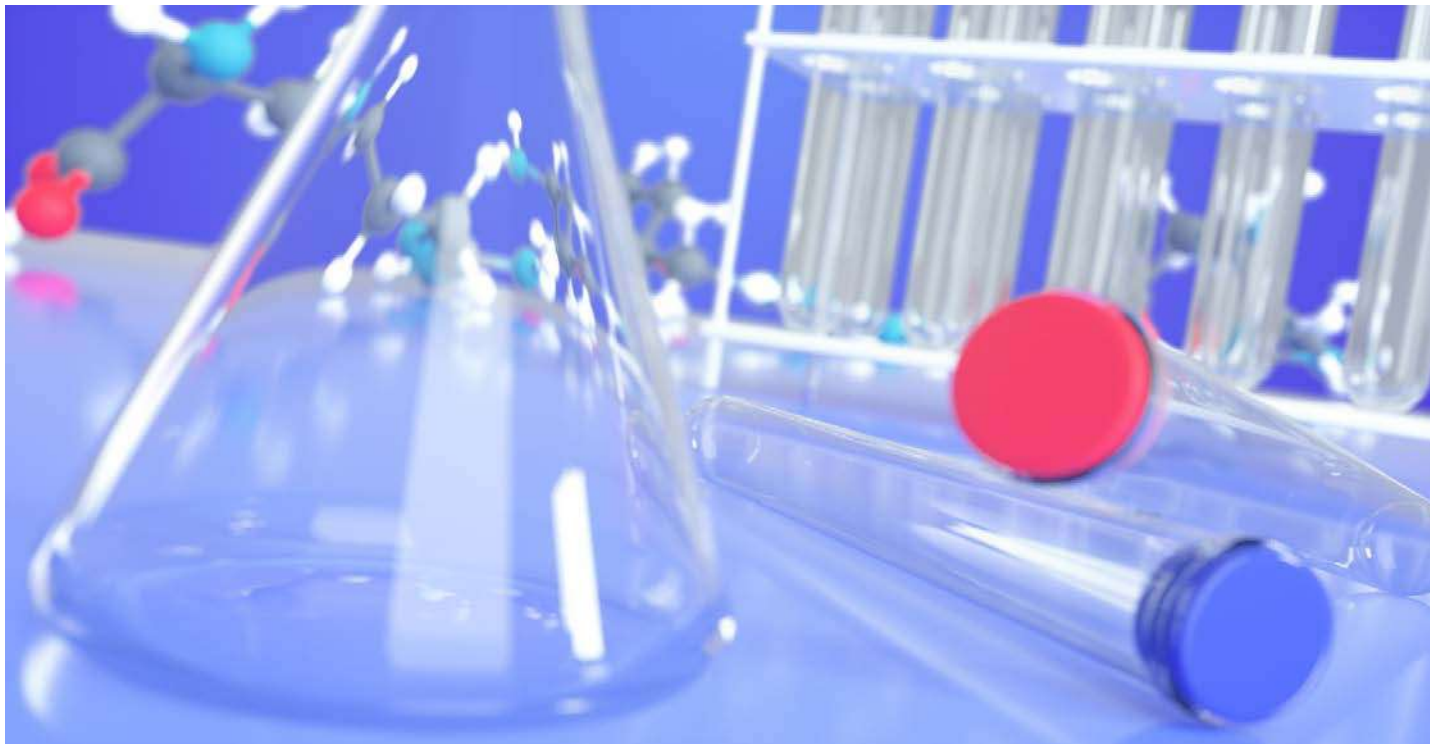
Supreme Pharmatech is one of the few biotech companies in the world, which is actively developing and applying liposomal nanotechnology on production scale. Supreme Pharmatech is operating at over 10,000 square meters facilities, which are partially powered by solar energy. The production process is automated at maximum level and complies with GMP regulations. All company products are certified by Thai FDA. The company also passed US FDA registration since beginning of 2021.

Nowadays food supplements market is rapidly changing into nano liposomal food supplements market, and Supreme Pharmatech is playing a leading role in this change. Liposomal nanotechnology is a revolutionary step in development of pharmaceutical and food industries. Liposomes can manipulate the solubility of encapsulated active ingredients, as well as protect them from degradation, and even achieve delivery to specific site. Oral liposome delivery system is capable to bypass the gastric system and deliver nutrients to the target cells and tissues in almost full digested amount. Liposomes are considered as the most promising carriers for nutrients delivery to the cells because of their ability of long circulation residence time, as well as precise targeting.

Liposomal ingredients of natural origin will soon play an important role in daily life of whole mankind. Liposomal nanotechnology is already used in development and production of vaccines and anti-cancer drugs. Liposomal nanoemulsions are finding more and more applications in pharmaceutical and food industries. It is estimated, that at the end of this decade liposomal nanotechnology will become dominant delivery system for pharmaceuticals and natural active ingredients.

Supreme Pharmatech is applying patented liposomal nanotechnology for production of new generation dietary food supplements for human and animal consumption. Liposomal dietary food supplements for humans may play vital role in integrative medicine and as a preventive measures for many diseases. Liposomal veterinarian dietary supplements may do the same for house pets and bigger animals. Human liposomal dietary food supplements and veterinarian liposomal dietary food supplements may have numerous forms, such as tablets, hard shell capsules with dry powders and hard shell capsules filled with nanoemulsion, softgels with nanoemulsion, ampoules with nanoemulsion, nano sprays, nano powders in sachets, nanoemulsions in sachets, and many more.

R&D department of Supreme Pharmatech constantly carries research in the field of biotech nanotechnology. We had developed numerous SOPs (Standard Operational Procedure) for vitamins, minerals, proteins and amino acids, oils, active botanicals and other active pharmaceutical ingredients (APIs).



## ABOUT LIPOSOMAL TECHNOLOGY

### WHAT IS LIPOSOME

*A liposome is a tiny sphere consisting of an aqueous core entrapped within one or more natural phospholipids, which are forming closed bilayered structures. It is happening because phospholipids are amphiphilic, they consist of a hydrophilic head and hydrophobic tail. When phospholipids get in an aqueous solution, the hydrophobic tails face each other avoiding the water and forming a phospholipid bilayer. This bilayer must form closed liposomal sphere in order to exclude water contacting hydrophobic tails.*

### SIZE OF LIPOSOMES

*Liposomes are nano-particles*

### PHOSPHOLIPID BILAYER

*Supreme Pharmatech is using highest purity phospholipids derived from sunflower*

### TOXISITY OF LIPOSOMES

*Liposomes have low toxicity and lack of immune system activation*

### PATENTED TECHNOLOGY

*Supreme Pharmatech is applying patented technology of liposomal encapsulation without the usage of harmful solvents. This unique method of nanoencapsulation can be described as Green Technology.*

## ADVANTAGES OF LIPOSOMAL TECHNOLOGY

### DIGESTIVE ADVANTAGES

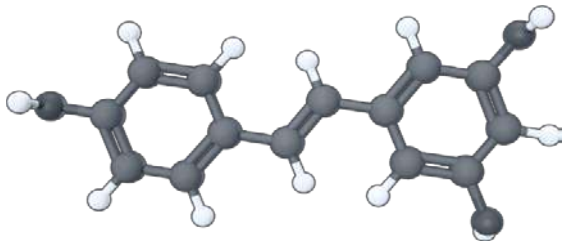
*Phospholipid bilayer of liposomes is impervious to the various digestive enzymes, acids and bile salts*

### AVOIDING LIVER METABOLIZATION

*The liposomes are absorbed by the enterocytes of the villi in the small intestine and incorporated into chylomicrons inside the enterocytes, then transported to subclavian vein through the lymph system, bypassing the portal circulation of the liver*

### INTRA-CELLULAR DELIVERY

- Adsorption way - is when the liposome wall adheres to the wall of the cell and releases its content into the cell.
- Endocytosis way - is when the cell engulfs the liposome, forms a membrane-bounded vesicle (endosome) and the liposome gains entry into the cell without passing through the cell membrane.
- Fusion way – is when liposome membrane melds with the membrane of the cell and carry the contents of the liposome into the cell.
- Lipid exchange – is when the contents of the liposome and cell exchange their lipid contents.



# R50

LIPOSOMAL  
**RESVERATROL**  
50 mg

Ref.No R50-C0-B30	Ref.No R50-TC-B30	Ref.No R50-TC-J30
<p><i>Hard gelatin (bovine) capsule #0 (sugar free)</i></p>   <p><i>Blister plate 115x75mm (15 capsules) 2 blister plates per box</i></p>  <p><i>Box 130x25x90mm (30 capsules)</i></p>	<p><i>Chewable tablet 1000mg (sugar free)</i></p>   <p><i>Blister plate 115x75mm (15 tablets) 2 blister plates per box</i></p>  <p><i>Box 130x25x90mm (30 tablets)</i></p>	<p><i>Chewable tablet 1000mg (sugar free)</i></p>   <p><i>Bottle with box 55x55x130mm (30 tablets)</i></p>

**United States Patent  
US20100239521A1**



**SUPREME**  
PHARMATECH



**FORMULA** $C_{14}H_{12}O_3$ **CLASS**

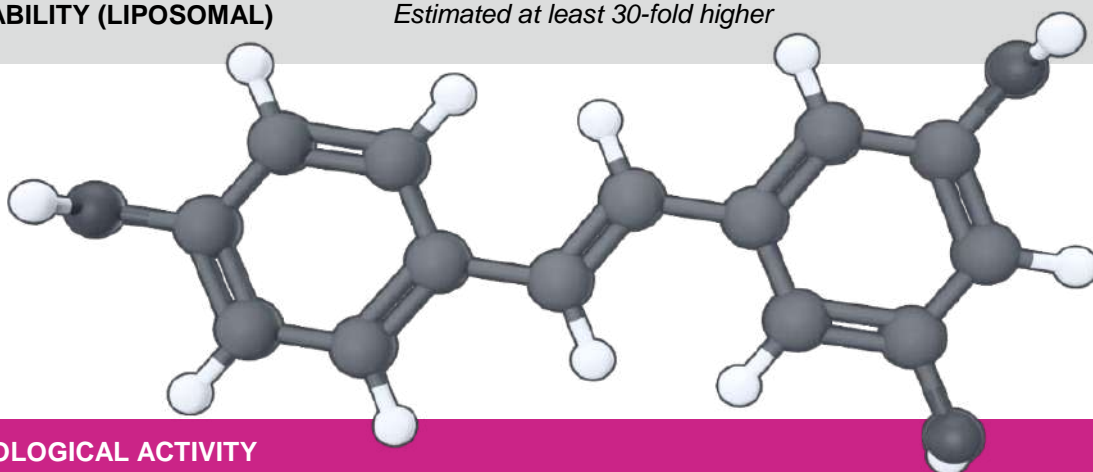
Stilbenoid, polyphenolic phytoalexin

**ORAL BIOAVAILABILITY**

Low

**ORAL BIOAVAILABILITY (LIPOSOMAL)**

Estimated at least 30-fold higher

**MAIN PHARMACOLOGICAL ACTIVITY****ANTIOXIDATIVE**

Scavenging free radicals, modulating antioxidant enzymes, prevents oxidative stress-induced cellular damage by increasing the plasma antioxidant capacity

**ANTICANCER**

Ability to inhibit carcinogenesis at multiple stages by inhibiting angiogenesis, preventing the activation of carcinogens, and induction of cell cycle arrest and apoptosis in tumor cells

**CARDIOPROTECTIVE**

Blocks the platelet aggregation that results in ischemia and stroke

Promotes vasorelaxation through multiple pathways

Reduces the formation of atherosclerotic plaques

Improves serum cholesterol and triglyceride concentrations

**ANTI-INFLAMMATORY**

Decreases inflammation by inhibiting the activation of inflammation mediators and markers

**IMMUNOMODULATING**

Exerts immune-regulatory effects on immune cells

Participates in immune cells activation

Improves immunologic activity against cancer cells

**NEUROPROTECTIVE**

Protects the brain against damage following cerebral ischemia and Alzheimer disease

**ANTIOBESITY**

Reduces body weight and adiposity, prevents an increase in triacylglycerol concentrations

**ANTIDIABETIC**

Improves glucose homeostasis, decreases insulin resistance, improves insulin secretion, and protects beta cells of pancreas

**POSSIBLE CLINICAL APPLICATION**

Cancers

Cardiovascular diseases including atherosclerosis, stroke, ischemia, heart failure

Metabolic disorders, including diabetes and obesity

Neurodegenerative diseases including Alzheimer's disease, Parkinson's disease, Huntington disease

Pathological inflammation

Bacterial and viral infectious diseases

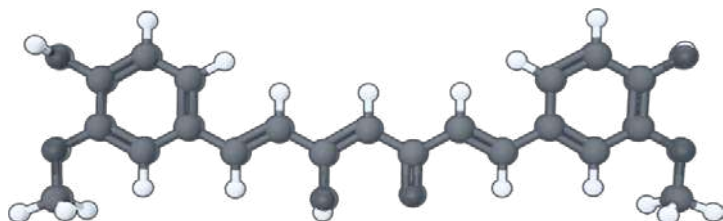
Autoimmune disease including lupus, multiple sclerosis, rheumatoid arthritis, psoriasis

**References:**

<https://www.nature.com/articles/nrd2060>

<https://www.mdpi.com/2072-6643/10/12/1892>

<https://pubmed.ncbi.nlm.nih.gov/31035454/>



# C50

LIPOSOMAL  
**CURCUMIN**  
50 mg

Ref.No C50-C0-B30	Ref.No C50-TC-B30	Ref.No C50-TC-J30
<p>Hard gelatin (bovine) capsule #0 (sugar free)</p>   <p>Blister plate 115x75mm (15 capsules) 2 blister plates per box</p>  <p>Box 130x25x90mm (30 capsules)</p>	<p>Chewable tablet 1000mg (sugar free)</p>   <p>Blister plate 115x75mm (15 tablets) 2 blister plates per box</p>  <p>Box 130x25x90mm (30 tablets)</p>	<p>Chewable tablet 1000mg (sugar free)</p>   <p>Bottle with box 55x55x130mm (30 tablets)</p>

United States Patent  
US20100239521A1



**SUPREME**  
PHARMATECH

**FORMULA** $C_{21}H_{20}O_6$ **CLASS**

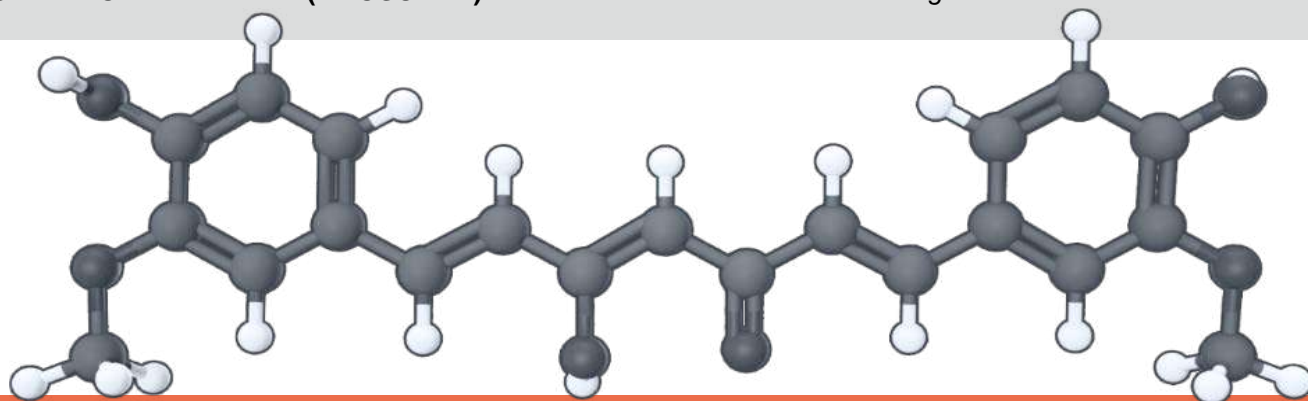
Phenol, curcuminoid (Diferuloylmethane)

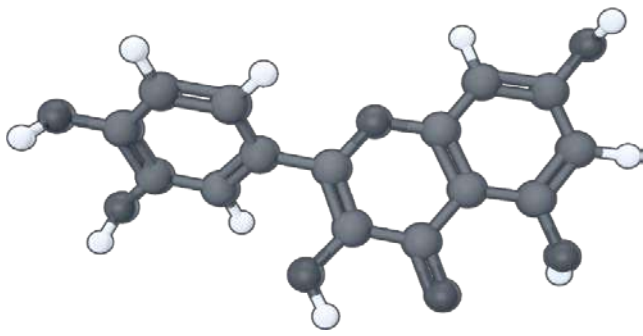
**ORAL BIOAVAILABILITY**

Less than 1%

**ORAL BIOAVAILABILITY (LIPOSOMAL)**


Estimated at least 30-fold higher

**MAIN PHARMACOLOGICAL ACTIVITY****ANTIOXIDATIVE***Improves systemic markers of oxidative stress**Modulates the activity of GSH, catalase, and SOD enzymes active in the neutralization of free radicals**Inhibits ROS-generating enzymes such as lipoxygenase/cyclooxygenase and xanthine hydrogenase/oxidase***ANTI-INFLAMMATORY***Capable to suppress inflammation through many different mechanisms***ANTIVIRAL***Antiviral activity against different viruses: papillomavirus virus (HPV), influenza virus, Hepatitis B virus (HBV), Hepatitis C virus (HCV), adenovirus, coxsackie virus, Human norovirus (HuNoV), Respiratory syncytial virus (RSV) and Herpes***ANTICANCER***Prevents carcinogenesis by affecting two primary processes: angiogenesis and tumor growth***ANTIBACTERIAL, ANTIFUNGAL***Inhibits growth of a variety of periodontopathic bacteria, pathogenic bacteria (E.coli, S.aureus, H.pylori), able to control fungal related spoilage and fungal pathogens***ANTIALLERGIC***Regulates airway inflammation and airway obstruction mainly by modulating cytokine levels***IMMUNOMODULATING***Immunesuppressive activities resulting in improvement of symptoms of rheumatoid arthritis***LIPID LOWERING, ANTIDIABETIC***Improves overall function of beta-cells, lowering level of HOMA-IR (insulin resistance index)**Shown significant improvements in BMI, body fat and body measures***NEUROPROTECTIVE***Beneficial effects against neurodegenerative diseases***POSSIBLE CLINICAL APPLICATION***Allergies and respiratory diseases, including respiratory tract infections and asthma**Bacterial and parasitic diseases, fungal and viral infections**Cancers, tumors, lupus, AIDS,  $\beta$ -Thalassemia**Cognitive impairment, including Alzheimer's disease**Metabolic disorders, including diabetes and obesity**Musculoskeletal diseases, including arthritis and degenerative bone diseases**Neuroinflammatory diseases, including Parkinson's disease and diabetic neuropathy**Depression, anxiety**Skin diseases (vitiligo, psoriasis)***References:**<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5664031/>[https://www.ijrrjournal.com/IJRR\\_Vol.7\\_Issue.1\\_Jan2020/IJRR0039.pdf](https://www.ijrrjournal.com/IJRR_Vol.7_Issue.1_Jan2020/IJRR0039.pdf)<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3535097/>



# Q50

LIPOSOMAL  
**QUERCETIN**  
50 mg

Ref.No Q50-C0-B30	Ref.No Q50-TC-B30	Ref.No Q50-TC-J30
<p><i>Hard gelatin (bovine) capsule #0 (sugar free)</i></p>   <p><i>Blister plate 115x75mm (15 capsules) 2 blister plates per box</i></p>  <p><i>Box 130x25x90mm (30 capsules)</i></p>	<p><i>Chewable tablet 1000mg (sugar free)</i></p>   <p><i>Blister plate 115x75mm (15 tablets) 2 blister plates per box</i></p>  <p><i>Box 130x25x90mm (30 tablets)</i></p>	<p><i>Chewable tablet 1000mg (sugar free)</i></p>   <p><i>Bottle with box 55x55x130mm (30 tablets)</i></p>

**United States Patent  
US20100239521A1**



**SUPREME**  
PHARMATECH



### FORMULA

$C_{15}H_{10}O_7$

### CLASS

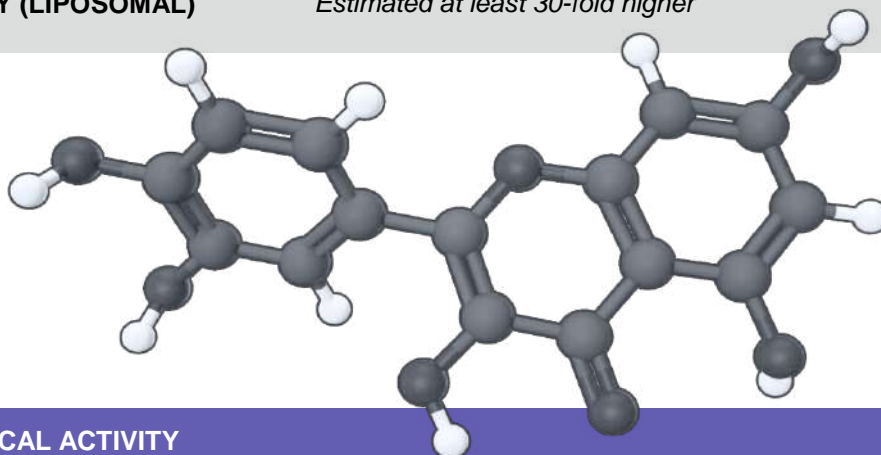
Bioflavonoid (3,3',4',5,7-pentahydroxyflavone)

### ORAL BIOAVAILABILITY

Low

### ORAL BIOAVAILABILITY (LIPOSOMAL)

Estimated at least 30-fold higher



## MAIN PHARMACOLOGICAL ACTIVITY

### ANTIOXIDATIVE

- Directly scavenging free radicals
- Chelating metal ions and inhibiting lipid peroxidation
- Regulating levels of glutathione to enhance antioxidant capacity
- Increasing expression of antioxidant enzymes glutathione transferase and aldo-keto reductase

### ANTIMICROBAL

- Good inhibitory effect on the growth of pathogenic bacteria:
- Aspergillus flavus*, *Escherichia coli*, *Proteus*, *Pseudomonas aeruginosa*, *Salmonella enteritidis*, *Staphylococcus aureus*

### ANTIPROTOZOAL

- Inhibitory effects against various protozoan parasites:
- Toxoplasma*, *Babesia*, *Theileria*, *Trypanosoma*, and *Leishmania*

### ANTIVIRAL

- Strong antiviral activity towards a wide range of viruses

### ANTI-INFLAMMATORY

- Significant anti-inflammatory potential in different cell types

### IMMUNOMODULATING

- Enhancing cellular and humoral immune functions

### NEUROPROTECTIVE

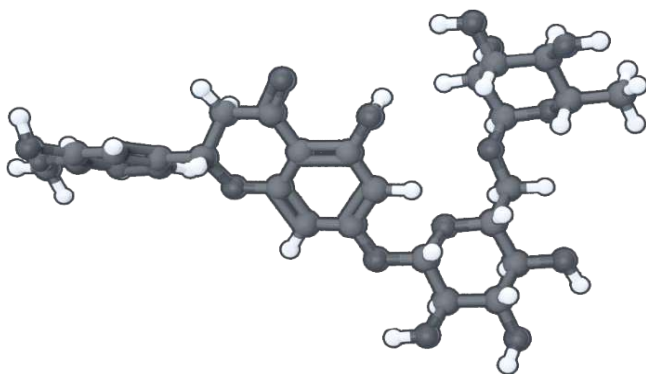
- Beneficial effects against neurodegenerative diseases with inhibitory effect against acetylcholinesterase and oxidative stress

## POSSIBLE CLINICAL APPLICATION

- Allergies and respiratory diseases
- Bacterial and parasitic diseases and viral infections
- Cancers, tumors
- Cardiovascular diseases
- Cognitive impairment, including Alzheimer's disease
- Hepatoprotective and anti-mycotoxin effect
- Immunomodulative effect
- Metabolic disorders, including diabetes and obesity
- Musculoskeletal diseases, including arthritis and degenerative bone diseases
- Neuroinflammatory diseases, including Parkinson's disease
- Renoprotective and anti-oxalate effect (kidney stones, gout)
- Skin and body ageing

### References:

- <https://www.hindawi.com/journals/omcl/2020/8825387/>
- <https://www.mdpi.com/2304-8158/9/3/374/pdf>
- <http://www.bioline.org.br/pdf?pr14215>

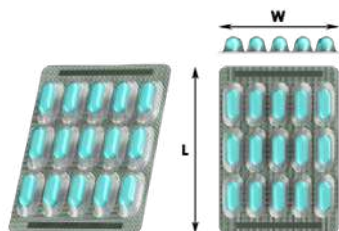


# H100

LIPOSOMAL  
**HESPERIDIN**  
100 mg

Ref.No H100-C0-B30

Hard gelatin (bovine)  
capsule #0 (sugar free)



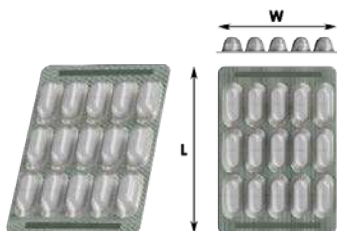
Blister plate 115x75mm  
(15 capsules)  
2 blister plates per box



Box 130x25x90mm  
(30 capsules)

Ref.No H100-TC-B30

Chewable tablet  
1000mg (sugar free)



Blister plate 115x75mm  
(15 tablets)  
2 blister plates per box



Box 130x25x90mm  
(30 tablets)

Ref.No H100-TC-J30

Chewable tablet  
1000mg (sugar free)



Bottle with box 55x55x130mm  
(30 tablets)

United States Patent  
US20100239521A1



**SUPREME**  
PHARMATECH

## FORMULA

$C_{28}H_{34}O_{15}$

## CLASS

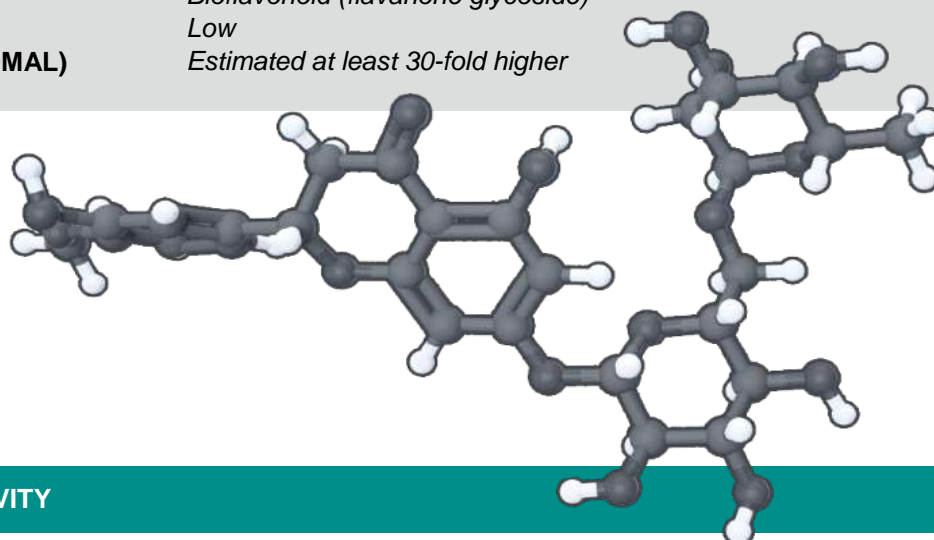
Bioflavonoid (flavanone glycoside)

## ORAL BIOAVAILABILITY

Low

## ORAL BIOAVAILABILITY (LIPOSOMAL)

Estimated at least 30-fold higher



## MAIN PHARMACOLOGICAL ACTIVITY

### ANTIOXIDATIVE

*Exerts direct free radical scavenging ability, capability to increase cellular glutathione content, reduces oxidative stress markers, inhibits lipid peroxidation, and prevents DNA damage*

### NEUROPROTECTIVE

*Ameliorates deficits in social interactive behaviors, suppresses the oxidative stress, attenuates behavioral alterations, regulates cellular signaling pathways involved in stroke and epilepsy*

### PSYCHOPROTECTIVE

*Exerts an antidepressant-like effect, decreases stress and anxiety, exerts a sedative effect*

### ANTICANCER

*Prevents carcinogenesis by inducing apoptosis of tumor cells, suppression of inflammation, and inhibition of the proliferation of cancer cells*

### CARDIOPROTECTIVE

*Exerts anti-hypotensive, hypolipidemic effect, and reduces inflammation*

### ANTI-INFLAMMATORY

*Decreases inflammation biomarkers, suppresses pro-inflammatory protein production*

### ANTIDIABETIC

*Exerts both hypoglycemic and hypolipidemic effects, attenuates hyperglycemia mediated oxidative stress*

### RADIOPROTECTIVE

*Protecting the DNA, immune and hematopoietic systems from X-ray, UV, and  $\gamma$ -radiation*

## POSSIBLE CLINICAL APPLICATION

*Cancers*

*Cardiovascular diseases including hypertension, myocardial infraction*

*Neurodegenerative diseases including epilepsy, Parkinson's and Alzheimer's diseases, stroke, Huntington disease*

*Psychiatric disorders including stress and anxiety*

*Liver disease including fatty liver, steatosis, alcohol-induced liver disease, and liver cancer*

*Allergies, asthma*

*Diabetes, hypercholesterolemia*

*Inflammatory skin diseases*

*Rheumatoid arthritis*

*Viral and bacterial infectious diseases*

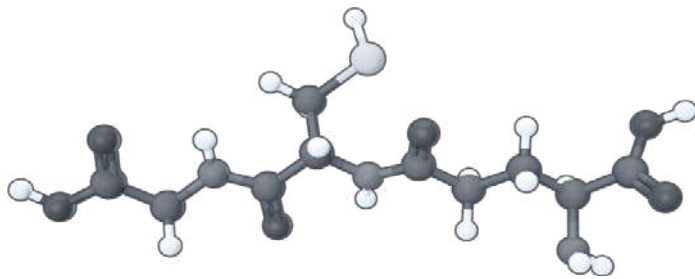
*Osteoporosis*

*Kidney diseases*

## References:

<https://pubmed.ncbi.nlm.nih.gov/25675136/>

<http://op.niscair.res.in/index.php/IJBB/article/view/27358>



# G50

LIPOSOMAL  
**GLUTATHIONE**  
50 mg

Ref.No G50-C0-B30	Ref.No G50-TC-B30	Ref.No G50-TC-J30
<p><i>Hard gelatin (bovine) capsule #0 (sugar free)</i></p>   <p><i>Blister plate 115x75mm (15 capsules) 2 blister plates per box</i></p>  <p><i>Box 130x25x90mm (30 capsules)</i></p>	<p><i>Chewable tablet 1000mg (sugar free)</i></p>   <p><i>Blister plate 115x75mm (15 tablets) 2 blister plates per box</i></p>  <p><i>Box 130x25x90mm (30 tablets)</i></p>	<p><i>Chewable tablet 1000mg (sugar free)</i></p>   <p><i>Bottle with box 55x55x130mm (30 tablets)</i></p>

**United States Patent  
US20100239521A1**



**SUPREME**  
PHARMATECH



## FORMULA

$C_{10}H_{17}N_3O_6S$

## CLASS

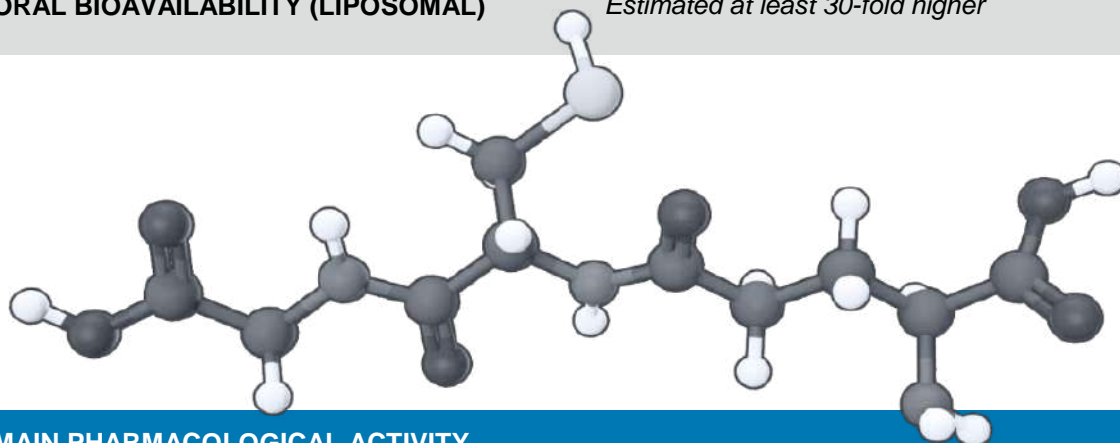
Tripeptide

## ORAL BIOAVAILABILITY

Insignificant

## ORAL BIOAVAILABILITY (LIPOSOMAL)

Estimated at least 30-fold higher



## MAIN PHARMACOLOGICAL ACTIVITY

### ANTIOXIDATIVE

Scavenges free radicals directly or through enzymatic catalysis, prevents the oxidation of biomolecules

### ANTI-INFLAMMATORY

Capable to suppress inflammation by decreasing the reactive oxygen species (ROS)

Capable to inhibit inflammatory pathways

### NEUROPROTECTIVE

Exerts significant improvement in cognitive performance and the Dementia Rating Scale

### ANTICANCER

Effective in removal and detoxification of carcinogens, helps to reduce cancer incidents

### HEPATOPROTECTIVE

Prevents liver oxidative injury by increasing antioxidant level

### ANTIVIRAL

Inhibits viral replication by reducing ROS levels, inhibits pro-inflammatory proteins levels associated with viral infections in HIV and Tuberculosis patients, prevents cytokine storm in Covid-19

### CARDIOPROTECTIVE

Prevents major cardiovascular diseases like hypertension and atherosclerosis by maintaining redox balance

### LUNG PROTECTIVE

Preventing lung diseases like chronic obstructive pulmonary diseases by maintaining the balance of thiol-redox state

### ANTIDIABETIC

Improves insulin-mediated glucose uptake, prevents the development of hyperglycemia and the decrease in insulin levels, reduces apoptosis in pancreatic  $\beta$ -cells

### IMMUNOMODULATING

Prevents autoimmune diseases and immune dysfunctions by reducing the oxidative burden and regulating immune cells response

## POSSIBLE CLINICAL APPLICATION

Cancers

Pulmonary viral infections diseases

Neurodegenerative diseases (Alzheimer's, Parkinson's, multiple sclerosis, autism)

Liver diseases (alcoholic, injury related, fibrogenesis related)

Autoimmune diseases (arthritis, lupus, psoriasis)

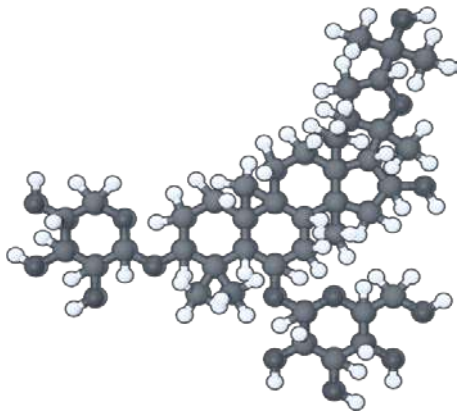
Osteoporosis

## References:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2756154/>

<https://www.mdpi.com/2076-3921/9/10/914/htm>

<https://link.springer.com/article/10.1007/s11064-020-03030-1>

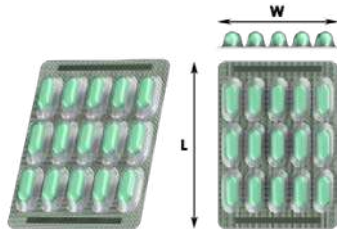


# A100

LIPOSOMAL  
**ASTRAGALUS**  
100 mg

Ref.No A100-C0-B30

Hard gelatin (bovine)  
capsule #0 (sugar free)



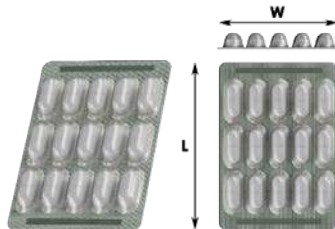
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(15 capsules)  
2 blister plates per box



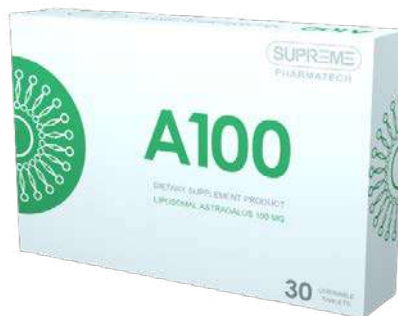
Box 130x25x90mm  
(30 capsules)

Ref.No A100-TC-B30

Chewable tablet  
1000mg (sugar free)



Blister plate 115x75mm  
(15 tablets)  
2 blister plates per box



Box 130x25x90mm  
(30 tablets)

Ref.No A100-TC-J30

Chewable tablet  
1000mg (sugar free)



Bottle with box 55x55x130mm  
(30 tablets)

United States Patent  
US20100239521A1



**SUPREME**  
PHARMATECH

### FORMULA

$C_{41}H_{68}O_{14}$  (Astragaloside IV)

### CLASS

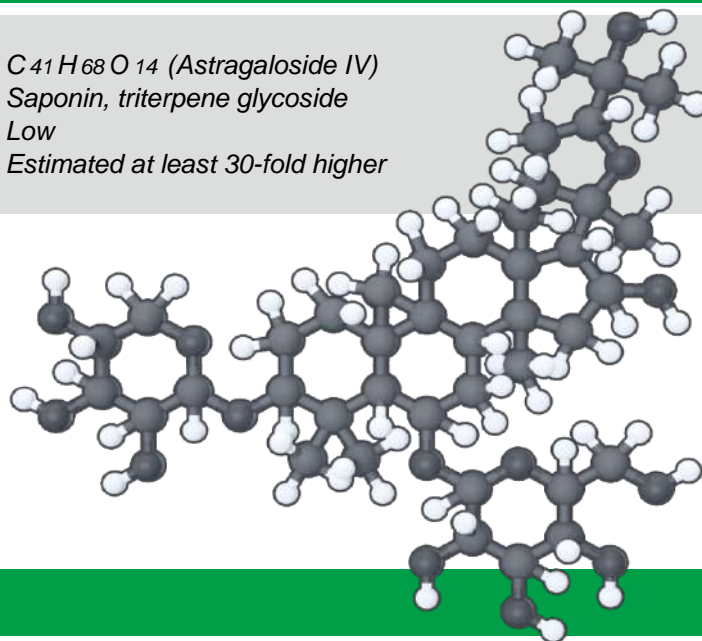
Saponin, triterpene glycoside

### ORAL BIOAVAILABILITY

Low

### ORAL BIOAVAILABILITY (LIPOSOMAL)

Estimated at least 30-fold higher



## MAIN PHARMACOLOGICAL ACTIVITY

### ANTIOXIDATIVE

Scavenges free radicals, increases the activity of antioxidant enzymes, inhibits the peroxidation

### ANTICANCER

Exerts anti-carcinogenesis properties by inhibiting tumor cell growth, preventing inflammation, increasing tumor suppression, and inhibiting cancer cell invasion

### CARDIOPROTECTIVE

Lowers the plasma lipids, exerts vasorelaxation effect, reduces cardiac muscle injury, inhibits blood pressure elevation

### ANTI-INFLAMMATORY

Inhibition of the production of inflammatory factors and their gene expression

### ANTIASTHMATIC

Inhibits airway inflammation associated with asthma

### IMMUNOMODULATING

Improves immune organs such as the liver, kidneys, and spleen, improves immunity by the proliferation of immune cells, exerts immune system enhancing effects

### NEUROPROTECTIVE

Protects dopaminergic neurons and promotes neural process outgrowth, maintains dopamine synthesis, prevents neuron pathology, reduces neural apoptosis, improves cognitive functions

### ANTIVIRAL

Decreases the viral replication, enhances the cellular immunity against viruses

### ANTIDIABETIC

Protects pancreatic beta cells from cell death, exerts positive effects on regulating the mechanism of glucose and lipid metabolisms, improves the insulin function, decreases the expression of an insulin-resistance protein

## POSSIBLE CLINICAL APPLICATION

Cancers

Neurodegenerative diseases incl. Alzheimer's disease, Parkinson's disease, substantia nigra

Metabolic diseases incl. diabetes type I and II

Viral infections incl. influenza and the common cold

Liver diseases incl. hepatitis, fatty liver disease, fibrosis, chronic liver injury

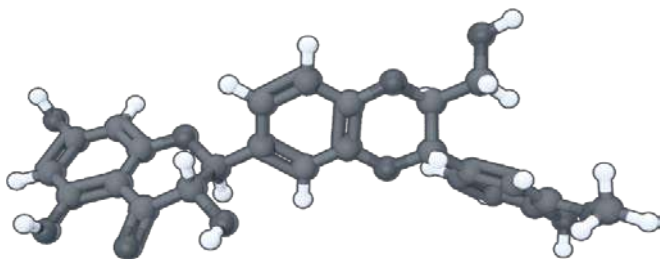
Cardiovascular diseases incl. heart failure, myocardial ischemia, reperfusion injury, cardiac hypertrophy

Asthma

### References:

<https://www.sciencedirect.com/science/article/pii/S1756464620305636>

<https://pubmed.ncbi.nlm.nih.gov/25087616/>



# S50

LIPOSOMAL  
**SILYMARIN**  
50 mg

Ref.No S50-C0-B30	Ref.No S50-TC-B30	Ref.No S50-TC-J30
<p><i>Hard gelatin (bovine) capsule #0 (sugar free)</i></p>   <p><i>Blister plate 115x75mm (15 capsules) 2 blister plates per box</i></p>  <p><i>Box 130x25x90mm (30 capsules)</i></p>	<p><i>Chewable tablet 1000mg (sugar free)</i></p>   <p><i>Blister plate 115x75mm (15 tablets) 2 blister plates per box</i></p>  <p><i>Box 130x25x90mm (30 tablets)</i></p>	<p><i>Chewable tablet 1000mg (sugar free)</i></p>   <p><i>Bottle with box 55x55x130mm (30 tablets)</i></p>

**United States Patent  
US20100239521A1**



**SUPREME**  
PHARMATECH



## FORMULA

 $C_{25}H_{22}O_{10}$  (Silibinin)

## CLASS

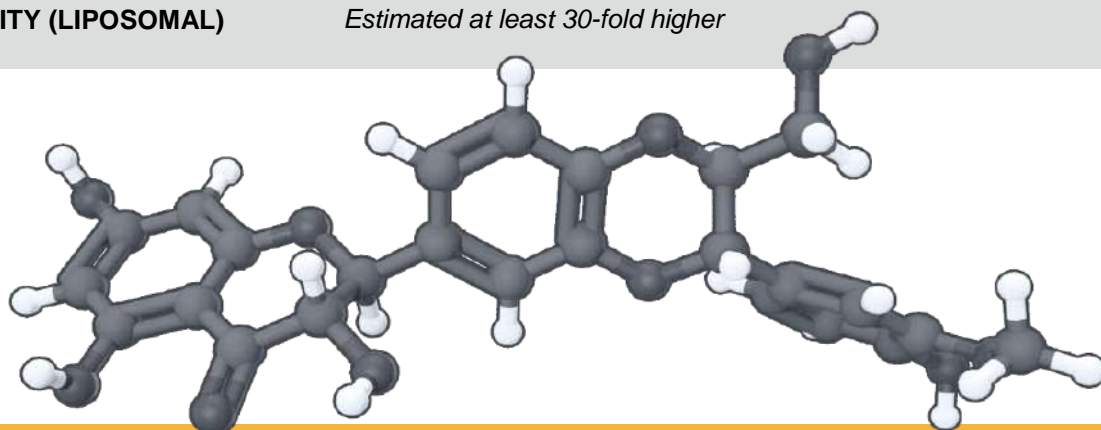
Bioflavonoid

## ORAL BIOAVAILABILITY

Low

## ORAL BIOAVAILABILITY (LIPOSOMAL)

Estimated at least 30-fold higher



## MAIN PHARMACOLOGICAL ACTIVITY

## ANTIOXIDATIVE

Increases the gene expression of antioxidant enzymes containing superoxide dismutase, glutathione peroxidase, and catalase. Inhibits lipid peroxidation, and increases the intracellular glutathione content

## ANTI-INFLAMMATORY

Significant anti-inflammatory effect via inhibition of the expression of various genes involved in the inflammatory process

## HEPATOPROTECTIVE

Prevents hepatic inflammation, inhibits the replication of infectious hepatitis C virus, increases membrane stability in exposure to xenobiotics, reduces the deposition of collagen fibers, anti-hepatotoxic potential

## ANTICANCER

Exerts cell proliferation suppression and apoptosis induction in cancer cells, inhibition of metastasis and angiogenesis

## NEUROPROTECTIVE

Exerts antioxidant activities in the central nervous system, elevates some neurotransmitters concentration in the brain, has an antidepressant effect, reduces the rotational behavior caused by Parkinson disease

## RENOPROTECTIVE

Improves alteration in serum creatinine concentrations, prevents nephrotoxicity and cancer of the kidney, protects the renal tissues from oxidative damage, treats inflammatory anemia in peritoneal dialysis patients

## IMMUNOMODULATING

Inhibits the activation of inflammatory mediators, inhibits the activation of human T-lymphocytes

## ANTIDIABETIC

Increases serum insulin, reduces serum glucose, prevents damages in pancreatic cells, recovers endocrine function and pancreatic morphology in diabetic models

## POSSIBLE CLINICAL APPLICATION

Cancers

Neurodegenerative diseases incl. Alzheimer's disease, Parkinson's disease, diabetic neuropathy

Metabolic diseases incl. diabetes, hypercholesterolemia.

Hemolysis diseases incl. sickle cell anemia and  $\beta$ -thalassemia disease

Osteoporosis

Cardiovascular diseases incl. ischemia and cardiac infarction

Gastrointestinal diseases incl. ulcers and colitis

Skin disorders incl. erythema, edema, sunburn, hyperplasia, photoaging, and melanogenesis

Liver diseases incl. hepatitis, cirrhosis, alcohol-related liver disease, fatty liver

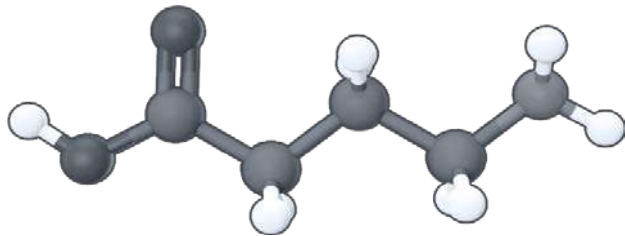
Fungal intoxication

## References:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3586829/>

<https://pubmed.ncbi.nlm.nih.gov/27771919/>

<https://link.springer.com/article/10.2165/00044011-200222010-00007>



# GB50

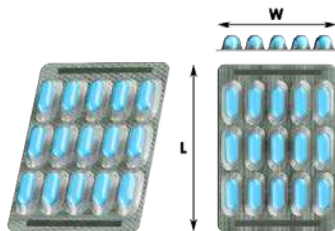
LIPOSOMAL

**GABA**

50 mg

Ref.No GB50-C0-B30

Hard gelatin (bovine)  
capsule #0 (sugar free)



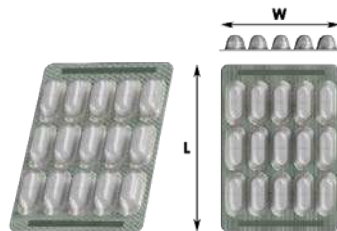
Blister plate 115x75mm  
(15 capsules)  
2 blister plates per box



Box 130x25x90mm  
(30 capsules)

Ref.No GB50-TC-B30

Chewable tablet  
1000mg (sugar free)



Blister plate 115x75mm  
(15 tablets)  
2 blister plates per box



Box 130x25x90mm  
(30 tablets)

Ref.No GB50-TC-J30

Chewable tablet  
1000mg (sugar free)



Bottle with box 55x55x130mm  
(30 tablets)

United States Patent  
US20100239521A1



**SUPREME**  
PHARMATECH

**FORMULA** $C_4H_9NO_2$  (Gamma-Aminobutyric acid, GABA)**CLASS**

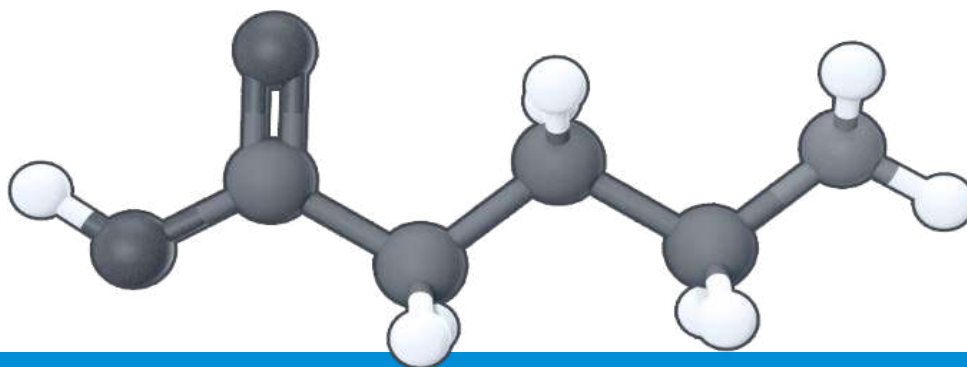
Inhibitory neurotransmitter

**ORAL BIOAVAILABILITY**

Insignificant

**ORAL BIOAVAILABILITY (LIPOSOMAL)**

Estimated at least 30-fold higher

**MAIN PHARMACOLOGICAL ACTIVITY****NEUROPROTECTIVE**

Alleviates the severity of epileptic seizures, changes the neuron excitability in neurodegenerative diseases, protects neurons against death induced by ischemia/reperfusion

**ANTI-INSOMNIAC**

Improves nighttime hormone secretion, discontinuing sleep, and sleeplessness

**PSYCHOPROTECTIVE**

Exerts antidepressant and stress-reducing effects, modulates different forms of anxiety, fears, phobias, and depression

**CARDIOPROTECTIVE**

Reduces blood pressure through its antihypertensive effects, regulation of cardiovascular functions through modulating hypercholesterolemia

**ANTICANCER**

Inhibits the metastasis and progression of cancer cells

**ANTIDIABETIC**

Reduces hyperglycemia, increases insulin secretion, improves impaired glucose tolerance

**IMMUNOMODULATING**

Modifies immune's cell proliferation, modulates the immune response to infections, activation or suppression of cytokine secretion

**POSSIBLE CLINICAL APPLICATION**

Neurological diseases incl. Alzheimer's disease, Parkinson's disease, Huntington's disease, seizures, epilepsy, autonomic disorders  
Alcoholism  
Drug addiction  
Premenstrual dysphoric disorder  
Autoimmune diseases incl. stiff-person syndrome, type I diabetes, rheumatoid arthritis, multiple sclerosis  
Mental disorders incl. anxiety disorders, insomnia, nervousness, schizophrenia  
Narcolepsy

**References:**

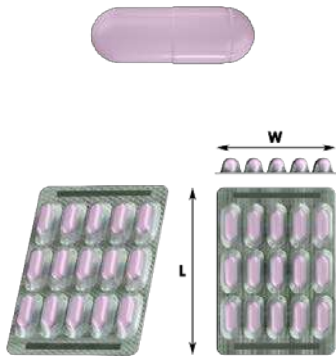
<https://www.frontiersin.org/articles/10.3389/fnins.2020.00923/full>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3680704/>

# V13

LIPOSOMAL  
MULTIVITAMIN  
COMPLEX

Ref.No V13-C0-B30

Hard gelatin (bovine)  
capsule #0 (sugar free)



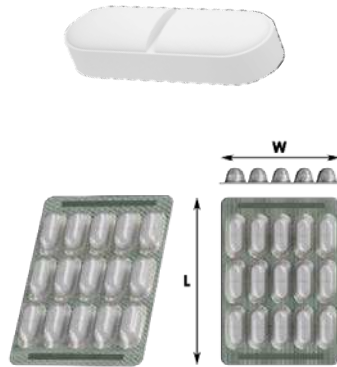
Blister plate 115x75mm  
(15 capsules)  
2 blister plates per box



Box 130x25x90mm  
(30 capsules)

Ref.No V13-TC-B30

Chewable tablet  
1000mg (sugar free)



Blister plate 115x75mm  
(15 tablets)  
2 blister plates per box



Box 130x25x90mm  
(30 tablets)

Ref.No V13-TC-J30

Chewable tablet  
1000mg (sugar free)



Bottle with box 55x55x130mm  
(30 tablets)

United States Patent  
US20100239521A1



**SUPREME**  
PHARMATECH



## FORMULA

$C_{20}H_{30}O$  (Vitamin A)  
 $C_{12}H_{17}N_4OS^+$  (Vitamin B1)  
 $C_{17}H_{20}N_4O_6$  (Vitamin B2)  
 $C_6H_5NO_2$  (Vitamin B3)  
 $C_9H_{17}NO_5$  (Vitamin B5)  
 $C_8H_{11}NO_3$  (Vitamin B6)  
 $C_{10}H_{16}N_2O_3S$  (Vitamin B7)  
 $C_{19}H_{19}N_7O_6$  (Vitamin B9)  
 $C_{63}H_{88}CoN_{14}O_{14}P$  (Vitamin B12)  
 $C_6H_8O_6$  (Vitamin C)  
 $C_{27}H_{44}O$  (Vitamin D3)  
 $C_{29}H_{50}O_2$  (Vitamin E)  
 $C_{31}H_{46}O_2$  (Vitamin K1)

## CLASS

Vitamins

## ORAL BIOAVAILABILITY

Low

## ORAL BIOAVAILABILITY (LIPOSOMAL)

Estimated at least 30-fold higher

## MAIN PHARMACOLOGICAL ACTIVITY

## ANTIOXIDATIVE

Vitamin A, Vitamin C, Vitamin D3, Vitamin E, Vitamin K

## ANTICANCER

B complex, Vitamin C, Vitamin D3, Vitamin E, Vitamin K

## ANTIDIABETIC

Vitamin D3, Vitamin A, Vitamin B<sub>7</sub>, Vitamin E

## IMMUNOMODULATING

Vitamin D3, Vitamin C, Vitamin E, Vitamin A

## ANTIVIRAL

Vitamin C, Vitamin D3

## NEUROPROTECTIVE

Vitamin E, Vitamin B1, Vitamin B6, Vitamin B9, Vitamin C

## CARDIOPROTECTIVE

Vitamin E, Vitamin C, Vitamin A, Vitamin B9, Vitamin B12

## HEPATOPROTECTIVE

Vitamin A, Vitamin B12, Vitamin C, Vitamin D3, Vitamin E, Vitamin K

## GASTROPROTECTIVE

Vitamin A, B complex, Vitamin C, Vitamin D3

## RENOPROTECTIVE

Vitamin A, Vitamin E, Vitamin C, Vitamin D3

## PSYCHOPROTECTIVE

Vitamin B1, Vitamin B6, Vitamin B9, Vitamin B12, Vitamin D3

## POSSIBLE CLINICAL APPLICATION

Cancers

Cardiovascular diseases incl. atherosclerosis, hypertension, myocardial infarction, stroke, coronary heart disease

Neurodegenerative diseases incl. Parkinson's disease, Alzheimer's disease, epilepsy

Metabolic diseases incl. diabetes, obesity, hypercholesterolemia

Rheumatoid arthritis, depression, osteoporosis, PMS, renal failure, anemia

Gastrointestinal diseases incl. inflammatory bowel disease, Crohn's disease, celiac disease, gallstones

Liver diseases incl. steatohepatitis, hepatitis, cirrhosis, hepatocellular carcinoma

Skin conditions incl. acne, psoriasis, photodamage, photoaging, and cellulite

Respiratory diseases incl. asthma, allergic rhinitis, and chronic rhinosinusitis

## References:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4419060/>

<https://psycnet.apa.org/record/2007-12463-002>