




Company Introduction

May 2018

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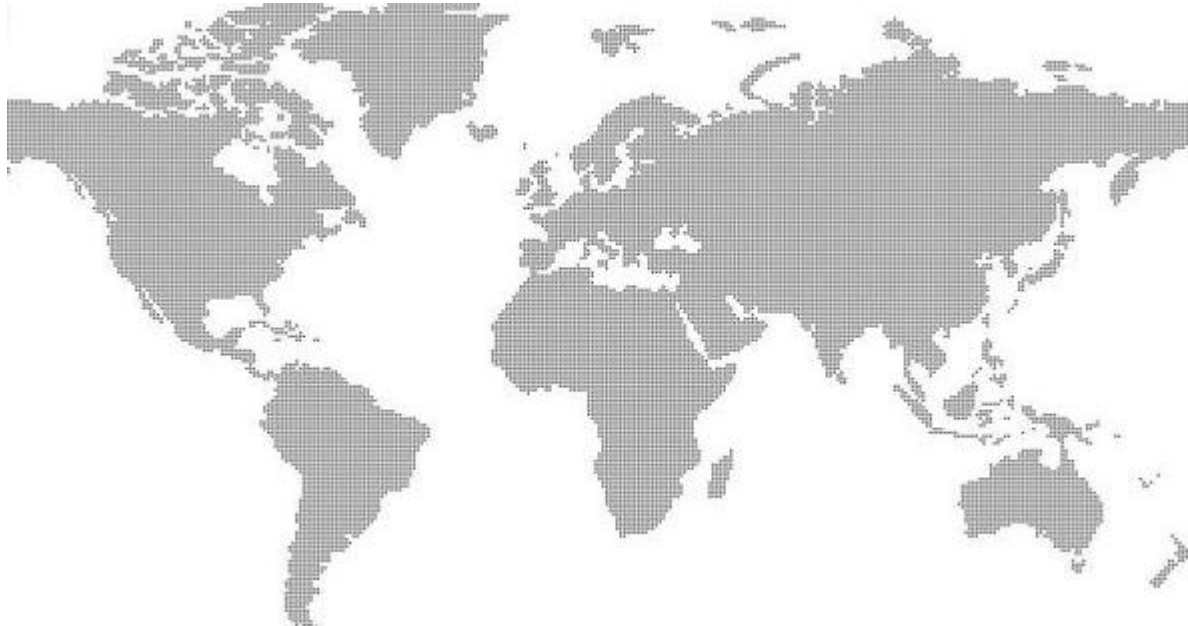
I. Overview

Jchembio Ltd is a marketer, distributor and consultant located in Korea. We provide quality products, services and information for the customers around the world.

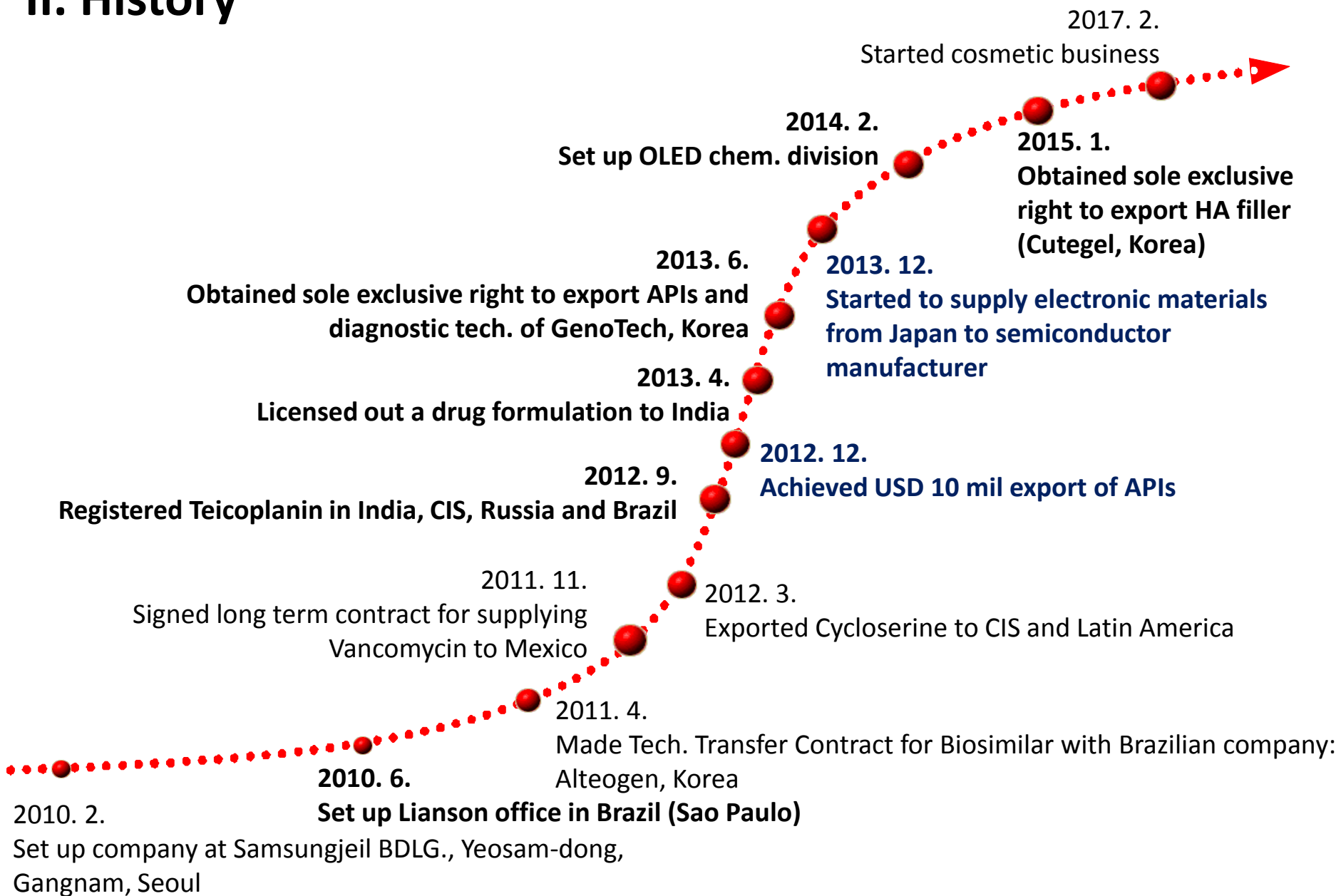
We have a wide range of products available - from APIs, finished formulations for pharmaceutical industry, healthcare products to chemicals and cosmetics.

Our highly motivated and interactive staff maintain a high level of service to our customers and this is how we uphold successful relationships with our suppliers.

South America, South East Asia, India, Russia and CIS are the main area we provide our products and services.



II. History



III. Major Customers (1/2)

MS Unichem (www.msgas.co.kr/english/)

- 1) Main Product: COSMO-S
- 2) Characteristics
 - UV absorber showing equivalent chemical properties to original product, Tinosorb[®] S

Samyang Biopharm (www.samyangbiopharm.com/eng)

- 1) Main Products: Transdermal patches (Nicotine, Rivastigmine and others)
- 2) Characteristics
 - Nicotine patch: No.1 M/S in domestic market
 - New formulation products produced with original technology.

Kyung Dong Pharm. (<http://www.kdpharma.co.kr/>)

- 1) Main Product Category: Antibacterial, Cardiovascular, Gastrointestinal
- 2) Characteristics
 - Strong at manufacturing antibacterial drug.
 - Main export areas: Japan, South-East Asia, Middle East and Central America

Yuil Pharm Tech. (www.yuilpharm.co.kr)

- 1) Main Products: APIs (Proglumetacin, Irsogladine, Atorvastatin etc.)
- 2) Characteristics: Production facility complies with GMP regulations.

III. Major Customers (2/2)

Daewon Pharm. (www.daewonpharm.com/en)

- 1) Main Products: Renamezin, Pelubi
- 2) Characteristics
 - Renamezin: Oral adsorptive charcoal
 - Pelubiprofen: Relieves symptoms (pains) and sign of osteoarthritis, back pain & rheumatoid

ST Pharm (www.stpharm.co.kr)

- 1) Main Products: Generic APIs (Gadobutrol and others)
- 2) Business Areas: CMO, Generic APIs, Fine Chemicals

BNC KOREA (www.bnckorea.co.kr/)

- 1) Main Product: Non-animal Hyaluronic Acid (HA)
- 2) Characteristics: Safe and durable three-dimensional structure HA.

GenoTech Corporation (www.genotech.co.kr/en)

- 1) Main Services: Genome analysis, molecular diagnosis
- 2) Characteristics: Original molecular diagnostics technology that is fast, accurate and uninfluenced by temperature.

Shaanxi Lighte Optoelectronics Material Co., Ltd (www.ltopto.com)

- 1) Main Products: Chemical intermediates for OLED, LCD
- 2) Characteristics: Strong R&D and commercialization of chemicals.

IV. Main Products_Nicotine Patch

- **Product Name:** Nicostop®
- **Indication:** Indicated as an aid to smoking cessation for the relief of nicotine withdrawal symptoms
- **Manufacturer:** Samyang Biopharm (www.samyangbiopharm.com/eng)

Composition

	Nicostop 30	Nicostop 20	Nicostop 10
Total nicotine in system	57mg	38mg	19mg
Actual amount released	21mg/day	14mg/day	7mg/day
System size	30cm ²	20cm ²	10cm ²

Dosage & Administration

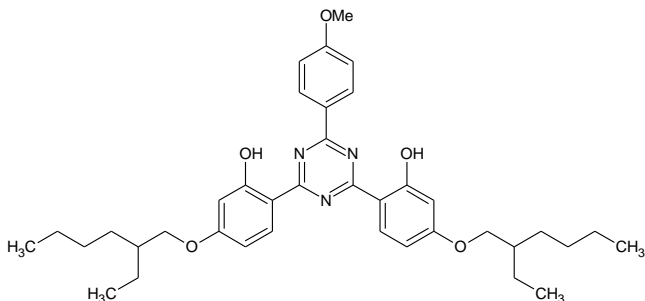
Segment	Step1	Step2	Step3
Heavy smokers (More than a pack/day)	Nicostop 30 for 4weeks	Nicostop 20 for 4weeks	Nicostop 10 for 4weeks
Light smokers (Less than a pack/day)	Nicostop 20 for 4weeks	Nicostop 20 for 4weeks	Nicostop 10 for 4weeks

- Nicostop systems should be applied only once a day to your non-hairy upper body or upper outer arm
- The use of Nicostop systems for longer than 3 months has not been studied

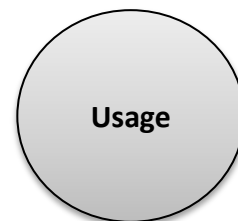


IV. Main Products_COSMO-S

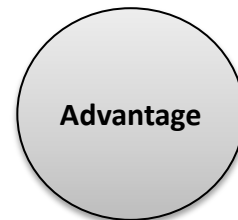
- **Product Name:** MS-COSMO-S
- **Description:** UV absorber
- **Manufacturer:** MS Unichem (www.msgas.co.kr/english/)
- MS Unichem is affiliated company of MS Corp.



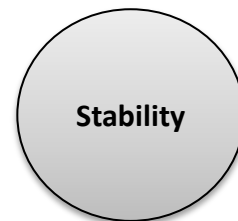
Generic Name	Bemotrizinol, Bis-ethylhexyloxyphenol methoxyphenyl triazine		
Product Name	MS-COSMO-S	CAS Number	187393-00-6
Molecular formula	C ₃₈ H ₄₉ N ₃ O ₅	Molecular weight	627.80 g/mol
Appearance	Powder	Color	Pale yellow
Odor	Odorless	Density	1.17 g/cm ³
Melting point	80 °C	λ _{max}	310&340nm (in EtOH)
E(1%, 1cm)	>1000 (in EtOH, 340nm)	λ _c	373nm
pH	7	UV-A/UV-B	0.73



- Functional cosmetics: used as ultraviolet blocking agent in sunscreen
- General cosmetics: used as a skin protection ingredient (skin lightening)



- Wide absorption spectrum (UV-A to UV-B)
- High Optical Stability
- Easily formulated with other cosmetics and sunscreen ingredients
- When mixed with most UV-B components, shows synergistic effect



- Compared to organic, substantial stability increase
- In many countries, allowed concentration is up to 10%

IV. Main Products_Renamezin

- **Product Name:** Renamezin Cap.
- **Manufacturer:** Daewon Pharm. (www.daewonpharm.com/en)
- **Action Mechanism**

Renamezin (API: Kremezín) is an oral adsorptive charcoal, consisting of porous spherical activated carbon of high purity.

It adsorbs Indole secreted in the gastrointestinal tract or produced in the intestinal tract and excretes the toxins out of the body with the feces, and accordingly lowers indoxyl sulfate (urotoxin) concentration. This function of Kremezín is effective in improving symptoms of uremia and delaying the introduction of dialysis treatment.

Brand Name	Renamezin Cap.
Active Pharmaceutical Ingredient	In one time dose (7 capsules), oral adsorptive charcoal 2g
Appearance	White hard capsule filled with black fine granule
Indication	Chronic renal failure : improving symptoms of uremia and delaying the introduction of dialysis treatment
Administration	For Adults, 7 capsules * 3 times daily (21 capsules/ day)
Storage	Room temperature (1 ~ 30°C)
Packing	630 capsules/box (30 blisters/box)
Shelf Life	12 months from manufacturing date

Renamezin Capsule Advantages!



Capsule Form Dialysis Delaying Treatment Agent

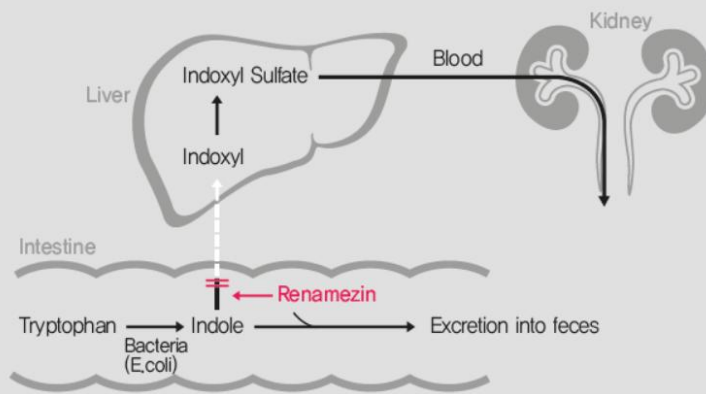


Solution for Granule Loss



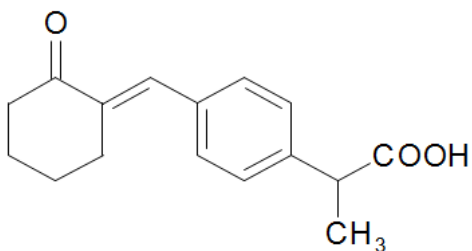
Comfortable Blister Packing

Action Mechanism of Oral Adsorptive Charcoal



IV. Main Products_Pelubiprofen

- Product Name: Pelubi Cap.
- Manufacturer: Daewon Pharm. (www.daewonpharm.com/en)
- The Pelubi tablet, a series of NSAIDs developed from raw materials to end product by Daewon Pharm.Co.Ltd., was certificated as the 12th new medicine by Ministry of Food and Drug Safety. It is a NSAIDs that is highly effective for pain relief and has less side effects in comparison with existing NSAIDs products.



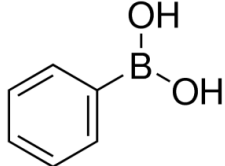
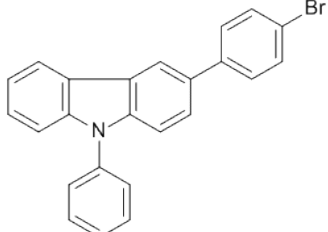
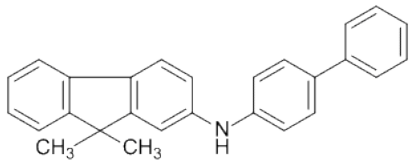
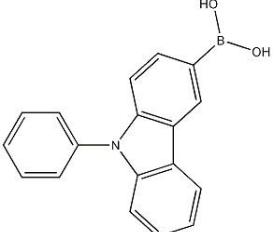
Brand Name	Pelubi Cap.
Active Pharmaceutical Ingredient	Pelubiprofen 30mg
Appearance	Lemon yellow, Circular Tab.
Dosage	Once 1 Tab., 3 times daily * Extended Release : Once 1 Tab., 2 times daily
Indication (Prodrug Type)	Relieves symptoms (pains) and sign of osteoarthritis, back pain & rheumatoid
Absorption	Absorbed rapidly with Tmax = 0.5hr (Maximum concentration in blood)
Mechanism of action	Inhibits the biosynthesis of Prostaglandin
Metabolism	Prodrug type Transformed rapidly and highly as Trans-OH form, Cis-OH form, Unsaturated OH form

IV. Main Products_HA

- **Product Name: Cutegel Lidocaine**
- **Description: Cross Linked Hyaluronic Acid 20mg/ml + Lidocaine HCl 3mg/ml (Dermal Filler)**
- **Manufacturer: BNC KOREA (www.bnckorea.co.kr/)**
- **Strengths**
 - 1) Easy Injection
 - 2) Improved Viscoelasticity
 - 3) Upgraded Durability
- **Cutegel obtained medical devices manufacturing certificate from MFDS, and proved its excellent quality with clinical trials executed at major hospitals in Korea.**



IV. Main Products_OLED Intermediates

Name	Structure	CAS No.
Phenyl boronic acid		98-80-6
3-(4-Bromophenyl)-9-phenylcarbazole		1028647-93-9
N-[1,1'-Biphenyl]-4-yl-9,9-dimethyl-9H-fluoren-2-amine		897671-69-1
9-Phenyl-9H-carbazol-3-ylboronic acid		854952-58-2

Thank you

Attachments

- 1. Indian Natural Products**
- 2. Alpha-Glycosyl Isoquercitrin**

Attachment 1. Indian Natural Products

SR. NO.	BOTANICAL NAME	COMMON NAME	ACTIVE INGREDIENTS & SPECIFICATION
1	<i>Androgaphis paniculata</i>	Kalmegh	Androgapholides 10% & 20%
2	<i>Adhatoda vasica</i>	Vasaka	Alkaloids 1.5%
3	<i>Asparagus racemosus</i>	Shatavari	Tannins 30%
4	<i>Azadirachta indica</i>	Neem	Bitters 3% & 10%
5	<i>Bacopa monnieri</i>	Brahmi	Bacosides 20% & 50%
6	<i>Boswellia serrata</i>	Shallaki	Boswellic Acids 70% & 80%
7	<i>Cassia angustifolia</i>	Senna	Calcium Sennosides 10% & 20%
8	<i>Camellia sinensis</i>	Green Tea	Polyphenols 70% & 80%
9	<i>Centella asiatica</i>	Mandukaparni	Asiaticosides 6%
10	<i>Coleus forskohlii</i>	Forskohlin	Forskohlin 10% ,20% & 40%
11	<i>Eclipta alba</i>	Bhringaraja	Alkaloids 1%
12	<i>Emblica officinalis</i>	Amla	Tannins 30%
13	<i>Gymnema sylvestris</i>	Madhunashini	Gymnemic acids 25% & 75% and 25% by HPLC
14	<i>Momordica charantia</i>	Karela	Bitters 3%
15	<i>Ocimum sanctum</i>	Tulsi	Ursolic acid 1.5%
16	<i>Terminalia belerica</i>	Baheda	Tannins 30%
17	<i>Terminalia chebula</i>	Harada	Tannins 30%
18	<i>Tinospora cordifolia</i>	Guduchi	Biters 2.5%
19	<i>Tribulus terrestris</i>	Gokshura	Saponins 40%
20	<i>Withania somnifera</i>	Ashvagandh	Withanoloids 2.5% and 10%
21	<i>Garcinia gummi-gutta</i>	Garcinia Combogia	50% and 60% HCA by chromodex
22	<i>Carica papaya</i>	Papaya	Polyphenols 3% and 40% Glycosides
23	<i>Coffea arabica</i>	Green Coffee Bean	50% Chlorogenic acids
24	<i>Curcuma longa</i>	Turmeric	Curcuminoids NLT 95%
25	<i>Ginkgo biloba</i>	Ginkgo	Ginkgo Flavones NLT 6% Ginkgo sides NLT 24%
26	<i>Panax ginseng</i>	Ginseng	Ginsenosides NLT 24%
27	<i>Glycyrrhiza glabra</i>	Licorice	Glycyrrhizinc Acid NLT 20%
28	<i>Morus</i>	Mulberry	Alkaloids NLT 1.0%
29	<i>Moringa oleifera</i>	Drumstick	Alkaloids NLT 0.10%

Attachment 2. Alpha-Glycosyl Isoquercitrin

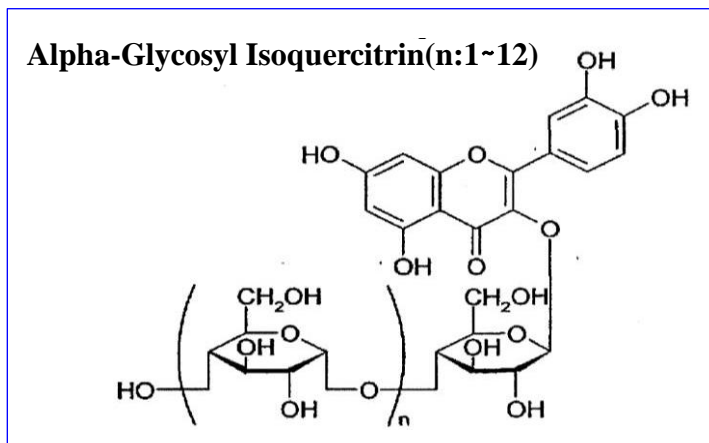
Overview

Alpha-Glycosyl Isoquercitrin provides the benefits of the flavonoid quercetin^[1] with better absorption and superior bioavailability. Isoquercitrin and isoquercetin are naturally occurring forms of quercetin with a glucoside side chain that enhances bioavailability. As an antioxidant and immune modulator, Alpha-Glycosyl Isoquercitrin offers the following benefits:

- 3 times more bioavailable than isoquercetin and nearly 18 times more bioavailable than standard quercetin.
- Enhances cellular antioxidant defenses.
- Supports cardiovascular health.
- Helps modulate the body's immune-response mechanisms.

Component	Bioavailability	Factor
Quercetin	2%	1 x
Isoquercitrin	12%	6 x
Alpha-Glycosyl Isoquercitrin	35%	17.5 x

Reference : Biol Pharm Bull 2009;32(12) 2034-40



General Uses

Alpha-Glycosyl Isoquercitrin is generally used as a strong **antioxidant, anti fading agent, flavor and fragrance deterioration inhibitor** for cosmetics and functional foods.

Examples) Cosmetics: Anti-aging cream, hand cream, sun block etc.

Strength

There are few companies who have the technology to produce Alpha-Glycosyl Isoquercitrin on a commercial scale. Our Alpha-Glycosyl Isoquercitrin is derived from enzymatically modified rutin. And rutin is extracted from a natural source, flower buds of Sophorae Japonica.

[1] Quercetin, a flavonol present in various vegetables and herbs, has numerous beneficial biological activities including supporting healthy cell proliferation, cardiovascular and immune function and anti-oxidative activities.