

Inhibits Glycation

AG Herb MIX

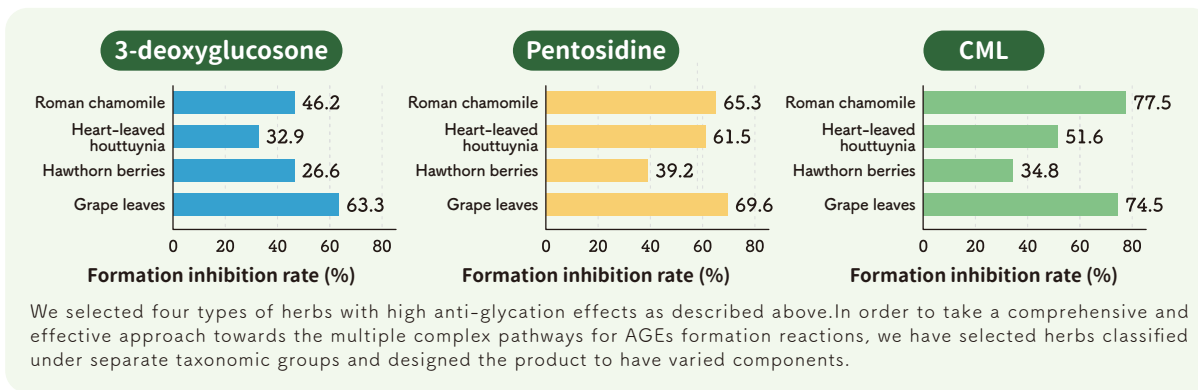


What is AG Herb MIX?

AG Herb MIX is a mixed herb product which has been screened for the purpose of inhibiting glycation reactions and in turn suppressing the formation of AGEs. Four types of herbs (roman chamomile, hawthorn berries, heart-leaved houttuynia and grape leaves) with different inhibitory activities have been combined and extracted with hot water. Since there are multiple complex pathways for the formation of advanced glycation end products (AGEs) via glycation reactions, it is not possible to inhibit the formation of AGEs by blocking only one pathway. Since there are multiple complex pathways for the formation of advanced glycation end products (AGEs) via glycation reactions, it is not possible to inhibit the formation of AGEs by blocking only one pathway. AG Herb MIX is a new type of anti-aging material that focuses on the protection of anti-glycation effects: it efficiently inhibits a variety of glycation reactions in order to protect your body from glycation.



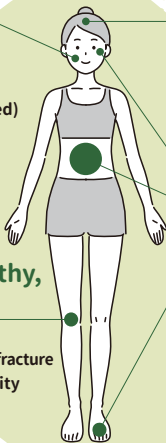
Seeking a Combination That Efficiently Inhibits Multiple Complex Pathways of Glycation Reactions ^{*1}



Diseases and Symptoms of Aging Caused by Glycation

Aging skin

- Decreased resilience and elasticity
- Dullness (yellow-toned)
- Uneven skin texture
- Increased wrinkles
- Outbreaks of spots



Alzheimer's disease

- Accelerated formation of senile plaques in the brain (aggregation of amyloid beta protein)

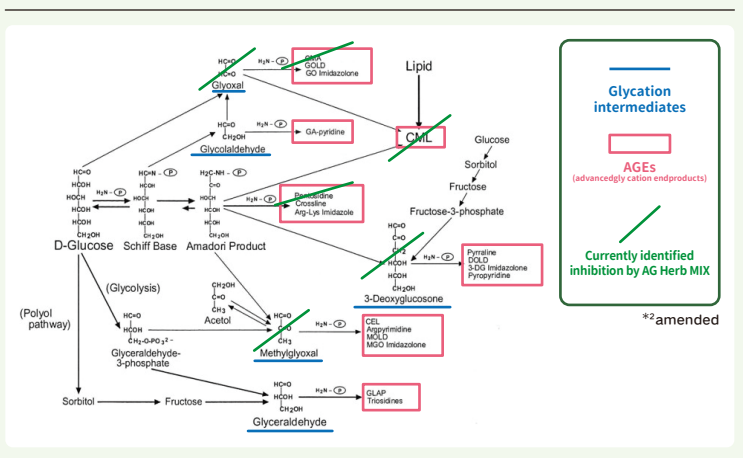
Diabetic complications

- Nerve disorders
- Retinopathy
- Nephropathy

Osteoarthropathy, osteoporosis

- Bone fragility
- Increased risk of bone fracture
- Decreased bone quality

AGEs Formation Pathways and Inhibition by AG Herb MIX.



Functionality

Anti-glycation effects, anti-aging, improvement of skin elasticity/spots/dullness, complexion improvement effects

Patent and Trademark

- Patent No. 4195840
Maillard reaction inhibitor
- Patent No. 4206479
Production method for maillard reaction inhibitor
- Patent No. 5144534
Flavor modifier for food and beverages
- AG Herb MIX™ is a registered brand by ARKRAY, Inc.

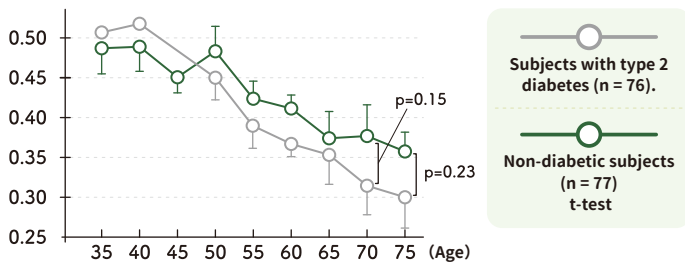


Skin resilience*3

Age and Skin Resilience

[Comparison between diabetic subjects and non-diabetic subjects]

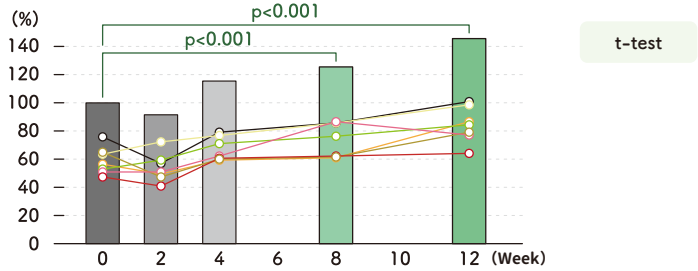
R7: Skin resilience (skin viscoelasticity)



The skin of diabetic patients has less resilience compared to that of patients without diabetes.

Improvement of Skin Resilience by Ingesting AG Herb MIX

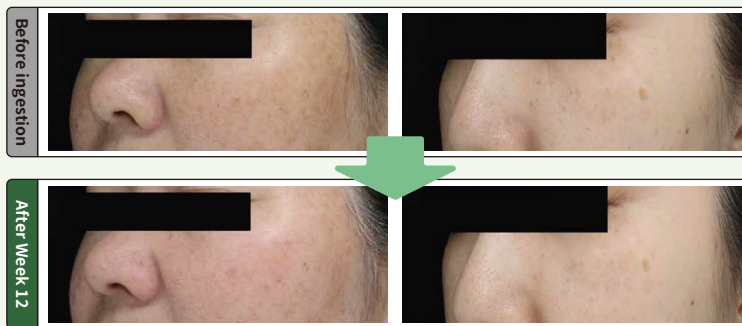
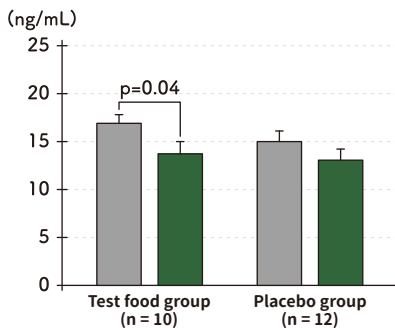
R7: Skin resilience (skin viscoelasticity)



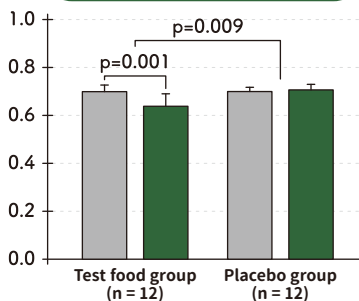
By ingesting 600 mg/day, the skin resilience index increased significantly from week 8 onwards in subjects with type 2 diabetes (7 subjects).

Yellow-toned dullness/spots*4

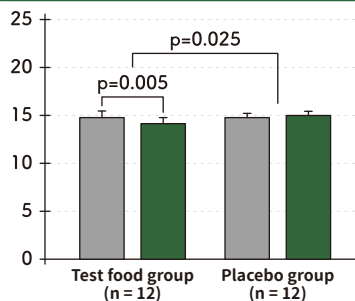
3-Deoxyglucosone in Blood (Healthy Subjects)



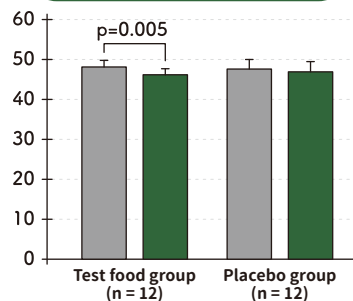
Melanin index in the upper arm skin (all subjects)



Yellowing tendency of upper arm skin (color difference b*) (all subjects)



Brown spots (VISIA) on the face (all subjects)



(Ingestion of 100 mg/day)

Before ingestion
After Week 12

mean +/- SEM

Intragroup: Dunnett's multiple comparison test
Between groups: two sample t-test

There was significant decrease in AGEs intermediate 3-deoxyglucosone (3DG) after ingestion by the test food group. By inhibiting production of 3DG, improvement of yellowing (yellow-tone dullness) and/or browning tendency of the skin can be expected.

Product Specifications

Properties Powder, pale-brown to brown in color, with a distinctive extract smell
Loss on drying 8% or less
Arsenic 2 ppm or less
Heavy metals 20 ppm or less
Total viable count 1,000 cfu/g or less
Fungal(mold, yeast) count 100 cfu/g or less
Coliforms Negative

Storage conditions

Sealed and stored at room temperature

Packing

1 kg (aluminum bag)

Product Appearance



Recommended daily intake

100-600 mg/day

Ingredients

Hot water extraction powder of four herbs (containing dextrin)
•Shoot system of heart-leaved houttuynia (*houottuyia cordata*)
•Hawthorn berries (fruit of the *crataegus laevigata*)
•Roman chamomile flower heads (*chamaemelum nobile*)
•Grape leaves (*vitis vinifera*)

Example of Use

Supplements, health foods, etc.

Example of Labeling

Mixed herb extract (dextrin, heart-leaved houttuynia, hawthorn berries, roman chamomile, grape leaves)

References

- * 1...Yonei Y *et al. Anti-aging Medicine*. 2008, 5(10), 93-8.
- * 2...Takeuchi M *et al. Current Drug Targets*. 2010, 11(11), 1468-82.
- * 3...Kubo M *et al. Journal of Clinical Biochemistry and Nutrition*. 2008, 43(suppl1), 66-9.
- * 4...Kawai H *et al. Glycative Stress Research*. 2016, 3(4), 236-45.

