

The Reliable Genuine Ginkgo biloba Extract

Available Ginkgo biloba Extracts:

- ✓ Flavone glycosides 22~27%, Bilobalide 2.6~3.2%, Ginkgolides A+B+C 2.8~3.4%, Ginkgolic acid<5ppm (EP)
- ✓ Flavone glycosides 22~27%, Bilobalide 2.6~5.8%, Ginkgolides A+B+C 2.8~6.2%, Ginkgolic acid<5ppm (USP)
- ✓ Flavone glycosides >24%, Terpene lactones >6%, Ginkgolic acids<10ppm (CP)
- ✓ Flavone glycosides >30%, Terpene lactones >10%, Ginkgolic acids<5ppm
- ✓ Flavone glycosides >24%, Terpene lactones >6%, Ginkgolic acids<1ppm
- ✓ Flavone glycosides >24%, Terpene lactones >6%, Water-soluble

For enquiry, please contact:

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there's no substitute for quality

Industry Alert – Ginkgo biloba extract adulteration

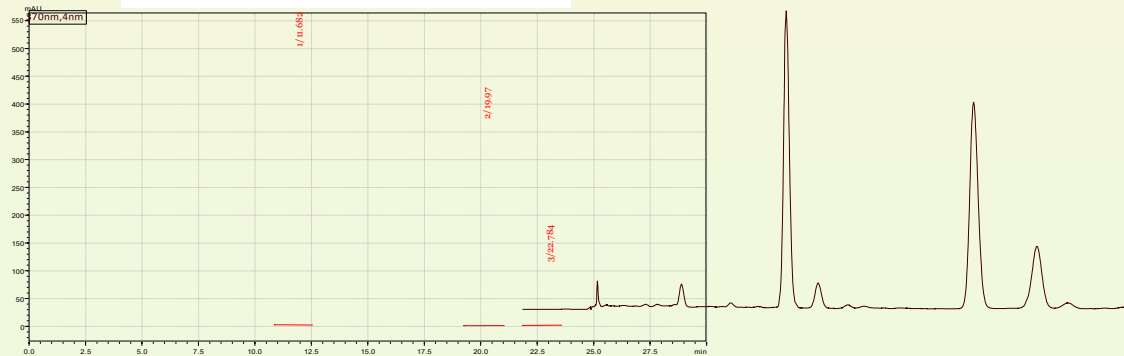
Adulteration of Ginkgo biloba extract to reduce the cost is not new in the marketplace, some are simple and easy to identify, some are very crafty. Typical adulterations are as below.

- Spike with Rutin/Quercetin (extract of *Sophora japonica*) to increase the flavonoids content;
- Spike with *Kaempferia galangal* and *Sophora japonica* extract to increase flavonoids content;
- Use Ginkgo biloba root bark to increase terpene lactones content.

Critical Points:

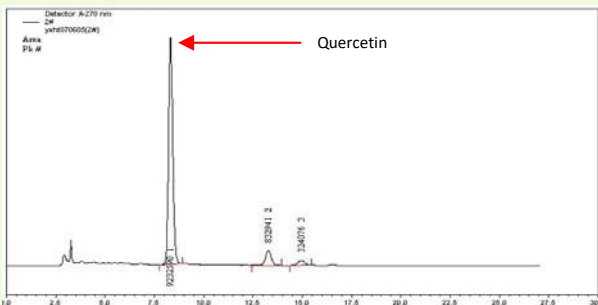
- US Pharmacopeia Identification B requires the peak for kaempferol is NLT 0.7 times the size of the quercetin peak, and the peak for isorhamnetin is NLT 0.1 times the size of the quercetin peak;
- Chinese Pharmacopeia Identification requires the peak for quercetin is 0.8–1.2 times the size of the kaempferol peak, and the peak for isorhamnetin is NLT 0.15 times the size of the quercetin peak.
- In genuine extracts: Free Quercetin and Kaempferol shall be less than 0.5%; Isorhamnetin shall be less than 0.4%, rutin shall be less than 4.0%; Genistein shall be less than 0.3%; Sophoricoside shall be Not Detectable.

Genuine GBE HPLC chromatograph

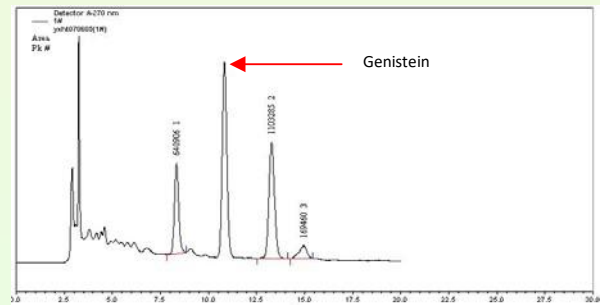


Adulterated GBE HPLC chromatography

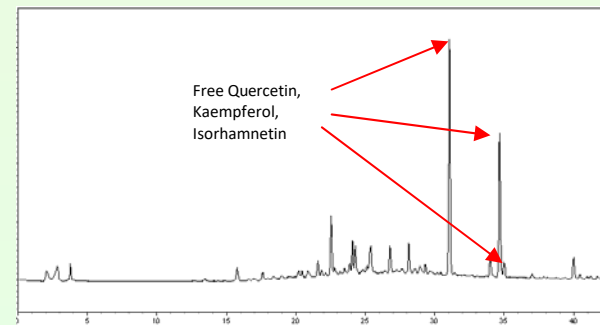
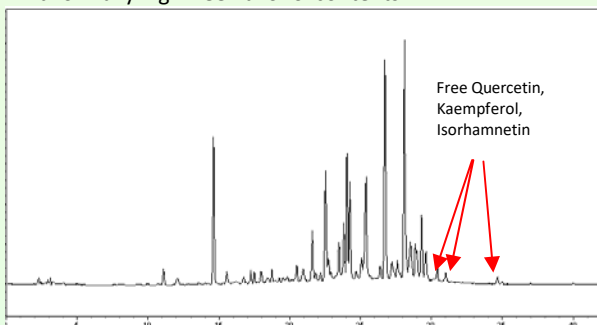
a) Abnormally high Quercetin



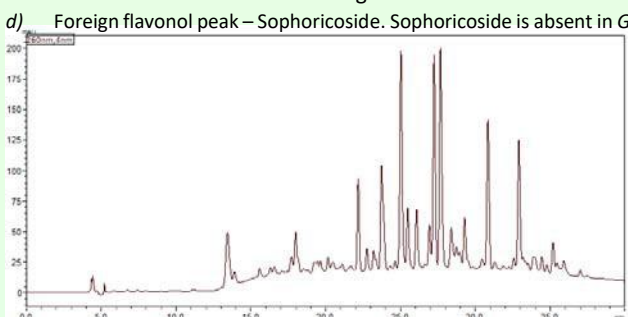
b) Foreign flavonol – Genistein. Genistein is absent in *Ginkgo biloba* leaf, but existing in *Kaempferia galangal* and *Sophora japonica*.



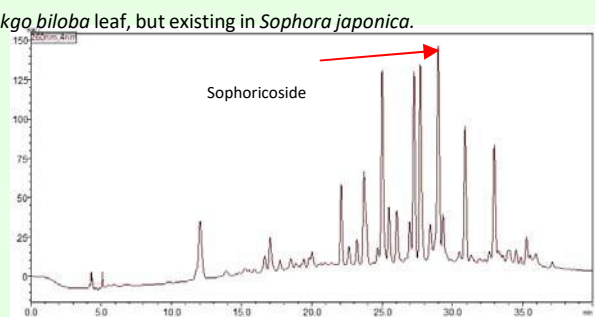
c) Abnormally high free flavonol contents



Free Flavonol in genuine GBE



Free flavonol in adulterated GBE



d) Foreign flavonol peak – Sophoricoside. Sophoricoside is absent in *Ginkgo biloba* leaf, but existing in *Sophora japonica*.

Sophoricoside is not detectable in genuine GBE

Sophoricoside in adulterated GBE