Technical documentation

Product name:	**qRE Glycine max (L.) Merr., seeds**
Substance:	Glycine max (L.) Merr., seeds dry extract
Plant source common names:	en: Soybean; fr: Soja
Reference:	E0081
Packaging:	100 mg in a 1.5 ml borosilicate amber vial
Storage conditions:	Keep container closed. Protect from light and moisture. Keep at -18 °C
Retest:	12 months

Botanical identification of plant source

Plants in our botanical garden are identified and a herbal voucher is prepared by an expert botanist.
Each batch collected for extraction is verified and identified.
Reference: Flora Europaea, Cambridge University Press, 1968, Vol 2, p 128

Mode of obtention of dry extract

Whole plant or plant parts are collected, freeze-dried and coarsely ground. Extraction is performed by decoction in 75 % (v/v) aqueous ethanol for 30 minutes. Ethanol is then evaporated under reduced pressure at less than 40 °C and the aqueous residue is freeze-dried.

Organoleptic characteristics of dry extract

Colour: Yellow
Odour: Non characteristic
Form: Fine powder

Recommended methods for use

Weight a precise weight of qRE and solubilise in the recommended solvent at the concentration indicated in the HPLC or HPTLC method described in this document.
Sonicate for 90 seconds (70 W). Filter on a 0.45 µm PVDF membrane and put the resulting solution into HPLC dispenser or apply on the HPTLC plate.
Dose and analyse your extract with qRExtract using the HPLC / HPTLC methods described in this document or using your own methods.

HPTLC

Detection of genistin, genistein, daidzin and daidzein

Layer: 10 × 10 cm HPTLC Nano-Sil-20 UV 254 (Carl Roth ref. N084.1)

Thin layer conditionnement: 1 h at room temperature and 33 % relative humidity

Elution solvent:

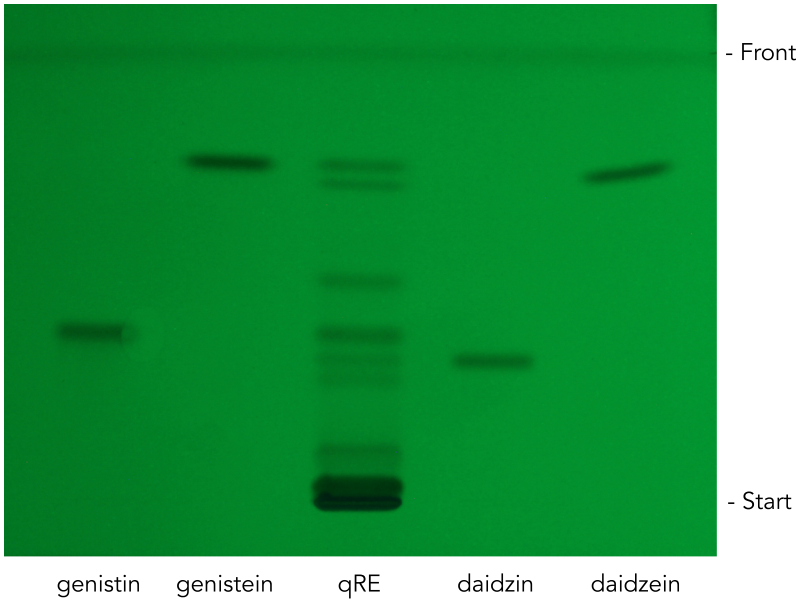
Elution solvent compound	Volume (ml)
chloroform	80
methanol	20
H_2O	2

Developing distance: 70 mm from the lower edge

Initial spot volume and concentration:

genistin: 1 µl of a 0.1 % (w/v) solution in 50 % (v/v) aqueous ethanol
genistein: 0.5 µl of a 0.1 % (w/v) solution in 50 % (v/v) aqueous ethanol
qRE: 10 µl of a 4 % (w/v) solution in 50 % (v/v) aqueous ethanol
daidzin: 1 µl of a 0.05 % (w/v) solution in 60 % (v/v) aqueous ethanol
daidzein: 1.5 µl of a 0.1 % (w/v) solution in ethanol 96 %

Reagent mixture: No reagent mixture for this migration
Dry the plate for 15 minutes at room temperature.
Expose to UV light at 254 nm.

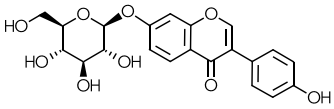
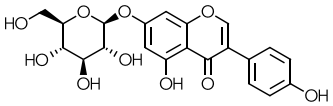
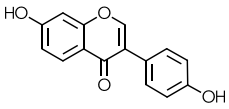
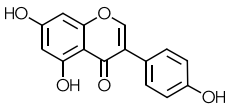
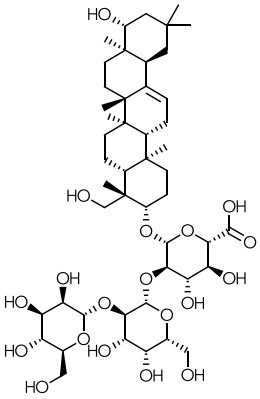


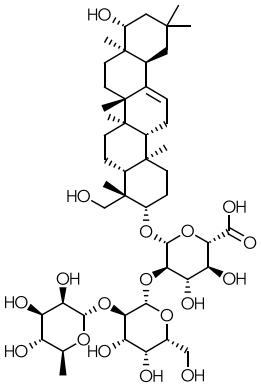
HPLC

Precolumn: Ascentis® Express C18 0.5 cm × 3.0 mm 2.7 µm
Column: Ascentis® Express C18 15 cm × 3.0 mm 2.7 µm
Sample: 8 µl 2.376 % qRE (w/v) solution in 50% (v/v) aqueous ethanol
Flow: 0.45 ml/min
Temperature: 25 °C
Mobile phase: A: 0.1 % formic acid (v/v) in water
B: 0.1 % formic acid (v/v) in acetonitrile
Detection: Diode Array Detector, 210 nm
Gradient:

Time (mn)	A %	B %
0	97	3
30	81	19
74	54	46
84	0	100
92	0	100

Quantified substances

Compound	CAS No	2D Structure	Peak No
Daidzin	552-66-9		3
Genistin	529-59-9		4
Daidzein	486-66-8		7
Genistein	446-72-0		8
Soya saponin Bb	NA		11

Compound	CAS No	2D Structure	Peak No
Soya saponin Bc	NA		12
Unknown	NA	NA	1, 2, 5, 6, 9,10, 13, 14, 15