

Certificate of Analysis

Product Name:	(±)-Equol	Batch Number:	E20423
Manufacture Date:	May 13 th , 2013	Analysis Date:	May 16 th , 2013
Batch Quantity:	100000 g	Expiration Date:	May 13 th , 2015
Packing:	Plastic jar	Test Standard:	USP33Standard

Items	Specifications	Result
Appearance	White powder	Complied
Particle Size	98% pass through 100 mesh	Complied
Bulk Density	~0.50 (g/ml)	Complied
Moisture	≤0.01%	Complied
R,S-Equol (3-(4-hydroxyphenyl)chroman-7-ol)	≥99%	Complied
Total Aerobic	≤1000 (CFU/g)	Complied
Mold and Yeast	≤100 (CFU/g)	Complied
Coliform	Negative	Negative
Salmonella	Negative	Negative
Heavy Metals	≤10 ppm	Complied
Lead	≤2 ppm	Complied
Arsenic	≤0.5 ppm	Complied
Mercury	≤0.1 ppm	Complied

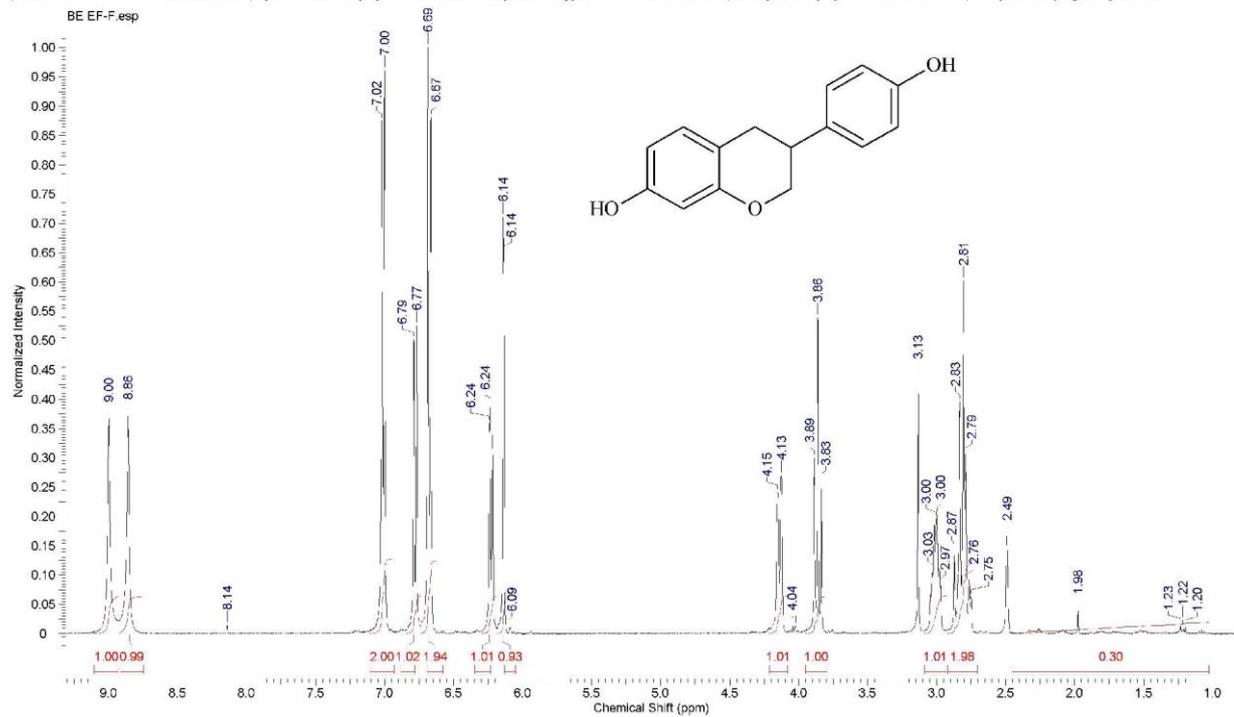
Conclusion:	Conform with specification
Storage:	Store in cool & dry place away from strong light and heat
Manufacturing Facility:	GMP ISO 9001:2008
Shelf life:	24 month when probably stored

Quality Assurance Officer:
Nikolai Beliaev



¹H-NMR spectrum

Formula	C ₁₂ H ₁₄ O ₃	FW	242.2699						
Acquisition Time (sec)	1.9923	Comment	Belyev EF-F						
Date Stamp		File Name							
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	9	Origin	spect	Original Points Count	16384
Owner	nmr	Points Count	32768	Pulse Sequence	zg30	Receiver Gain	144.00	SW(cyclical) (Hz)	8223.68
Solvent	DMSO+CDCL4	Spectrum Offset (Hz)	2547.8267	Spectrum Type	STANDARD	Sweep Width (Hz)	8223.43	Temperature (degree C)	25.160



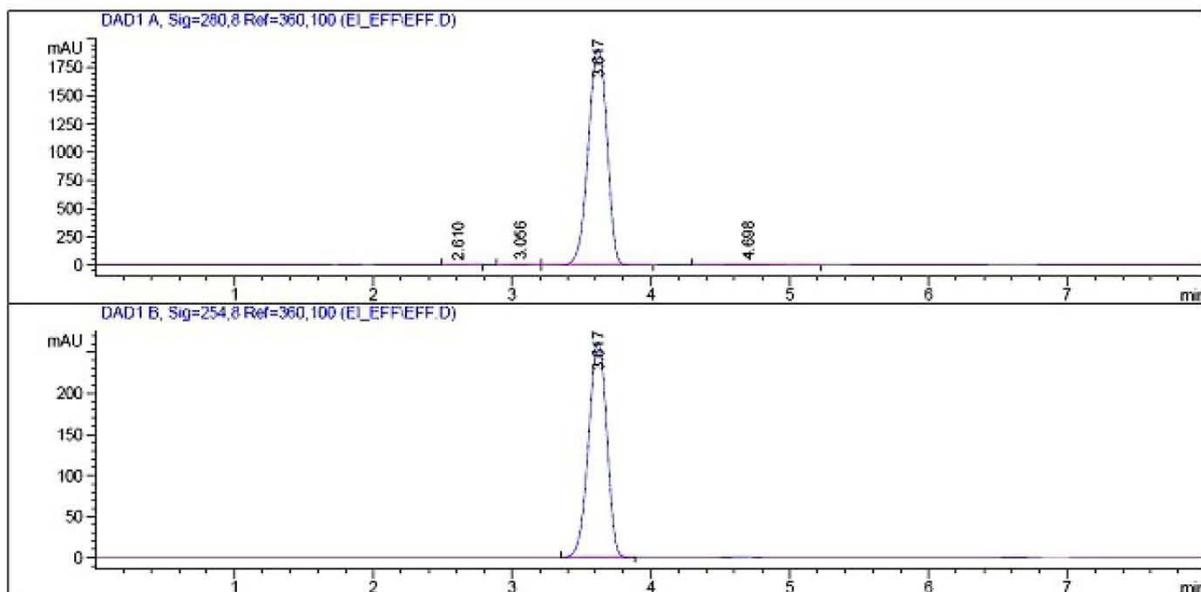
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Acq. Operator   : Igor
Acq. Instrument : Instrument 1
Location       : Vial 31

Inj Volume     : 10 µl

Method        : C:\CHEM32\1\DATA\EI-E126-2.M

Method Info   : EI-E126-2 on XDB
  
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Area Percent Report

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Sorted By      : Signal
Multiplier     : 1.0000
Dilution       : 5.000e4
Sample Amount  : 2.50000 [ng/ul] (not used in calc.)
Use Multiplier & Dilution Factor with ISTDs
  
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Signal 1: DAD1 A, Sig=260,8 Ref=360,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	2.610	BB	0.1016	12.54274	1.93508	3.459e3
2	3.056	BV	0.1392	36.09314	4.16220	9.954e3
3	3.617	VB	0.1497	1.80030e4	1915.28979	4.965e6
4	4.698	BB	0.2962	77.62558	4.11202	2.141e4

Totals : 1.81293e4 1925.49910

Signal 2: DAD1 B, Sig=254,8 Ref=360,100

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	3.617	BB	0.1466	2397.59229	262.40738	5.000e6

Totals : 2397.59229 262.40738

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*** End of Report ***