

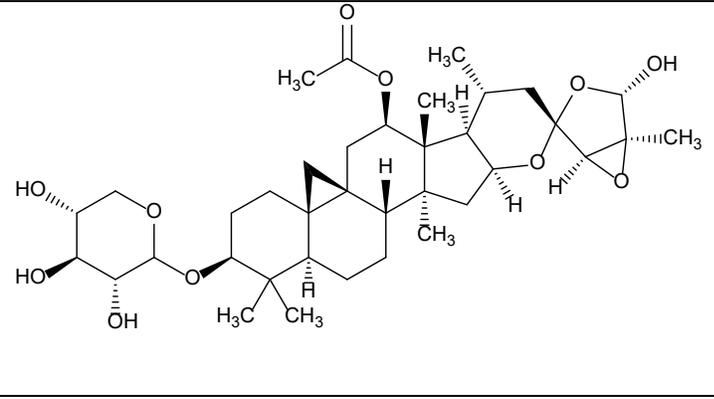
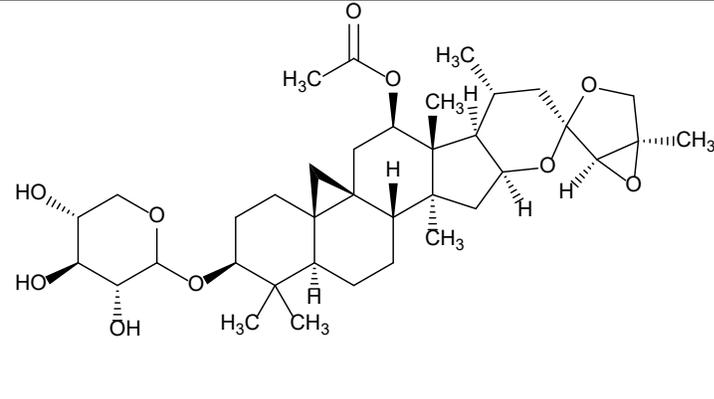


Certificate

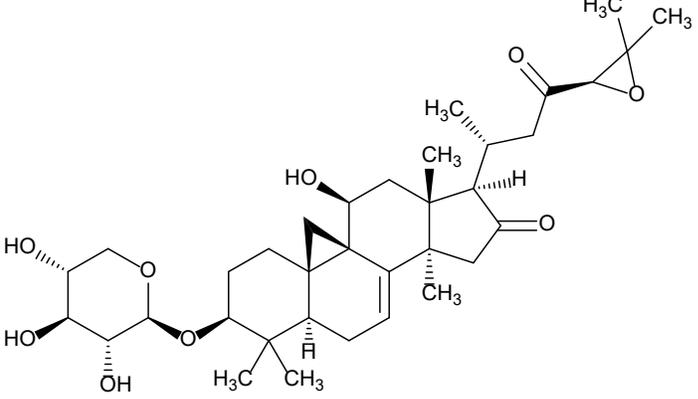
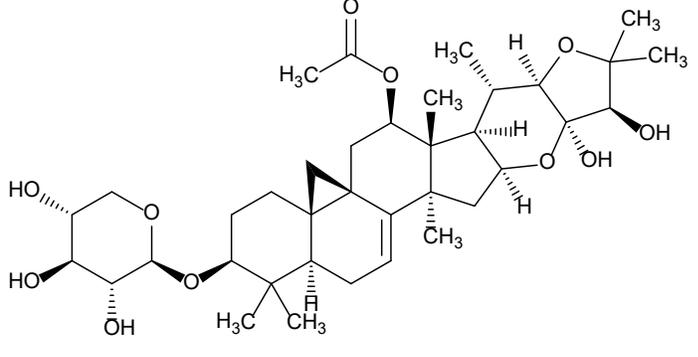
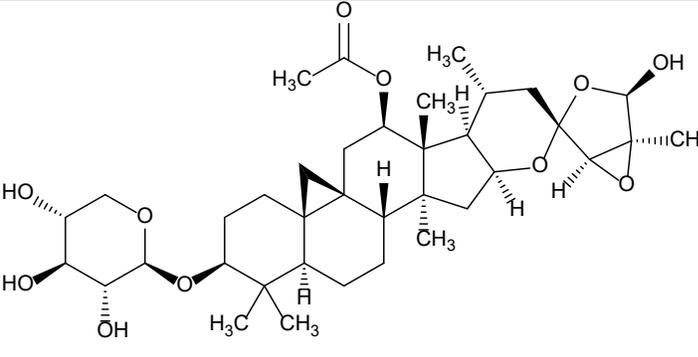
POWDERED BLACK COHOSH EXTRACT

USP Catalog No.: 1076206

USP Lot No.: R192M0

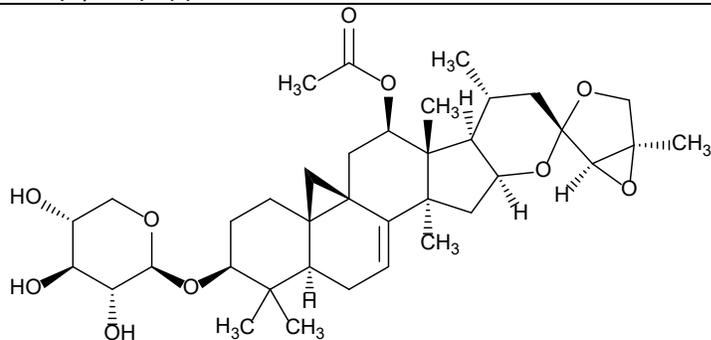
N/A	CAS Number:	84776-26-1
	Molecular Formula:	N/A
	Molecular Weight:	N/A
<i>Only compendial components as listed in the monograph are shown below.</i>		
(26S)-Actein (Actein); ((3 β ,12 β ,16 β ,23R,24R,25S,26S)-12-(Acetyloxy)-16,23:23,26:24,25-triepoxy-26-hydroxy-9,19-cyclolanostan-3-yl β -D-xylopyranoside)		
	CAS Number:	18642-44-9
	Molecular Formula:	C ₃₇ H ₅₆ O ₁₁
	Molecular Weight:	676.84
23-<i>epi</i>-26-Deoxyactein; (3 β ,12 β ,16 β ,23R,24R,25R)-12-(Acetyloxy)-16,23:23,26:24,25-triepoxy-9,19-cyclolanostan-3-yl β -D-xylopyranoside)		
	CAS Number:	501938-01-8
	Molecular Formula:	C ₃₇ H ₅₆ O ₁₀
	Molecular Weight:	660.85



Cimicifugoside H-1; (3 β ,11 β ,24 <i>R</i>)-24,25-Epoxy-11-hydroxy-16,23-dioxy-9,19-cyclolanost-7-en-3-yl β -D-xylopyranoside	
	CAS Number: 163046-73-9
	Molecular Formula: C ₃₅ H ₅₂ O ₉
	Molecular Weight: 616.79
Cimiracemoside A; (3 β ,12 β ,16 β ,22 <i>R</i> ,23 <i>R</i> ,24 <i>R</i>)-12-Acetyloxy-16,23:22,25-diepoxy-23,24-dihydroxy-9,19-cyclolanost-7-en-3-yl β -D-xylopyranoside	
	CAS Number: 264875-61-8
	Molecular Formula: C ₃₇ H ₅₆ O ₁₁
	Molecular Weight: 676.84
(26<i>R</i>)-Actein; (3 β ,12 β ,16 β ,23 <i>R</i> ,24 <i>R</i> ,25 <i>S</i> ,26 <i>R</i>)-12-(Acetyloxy)-16,23:23,26:24,25-triepoxy-26-hydroxy-9,19-cyclolanostan-3-yl β -D-xylopyranoside	
	CAS Number: 947160-03-4
	Molecular Formula: C ₃₇ H ₅₆ O ₁₁
	Molecular Weight: 676.84



26-Deoxycimicifugoside; (3 β ,12 β ,16 β ,23S,24R,25R)-12-(Acetyloxy)-16,23:23,26:24,25-triepoxy-9,19-cyclolanost-7-en-3-yl β -D-xylopyranoside

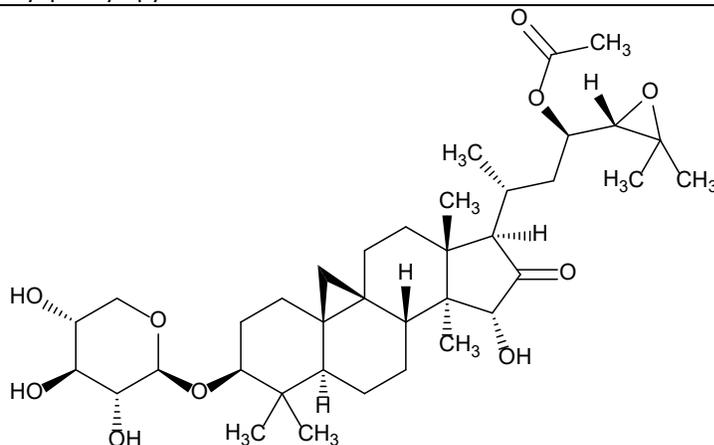


CAS Number: 214146-75-5

Molecular Formula: C₃₇H₅₄O₁₀

Molecular Weight: 658.83

Acetyl-shengmanol-xyloside; (3 β ,15 α ,23R,24S)-23-Acetyloxy-24,25-epoxy-15-hydroxy-16-oxy-9,19-cyclolanostan-3-yl β -D-xylopyranoside

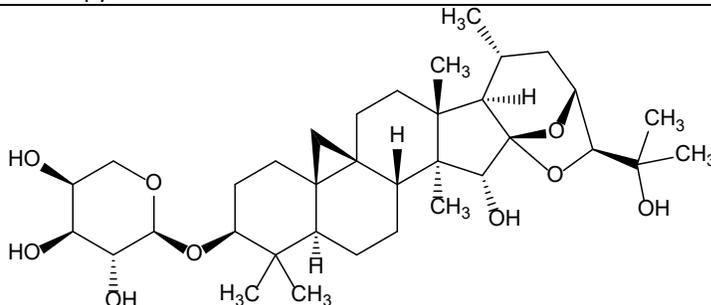


CAS Number: 62498-88-8

Molecular Formula: C₃₇H₅₈O₁₀

Molecular Weight: 662.86

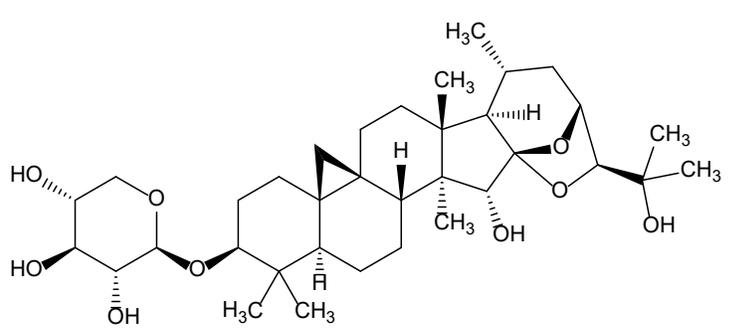
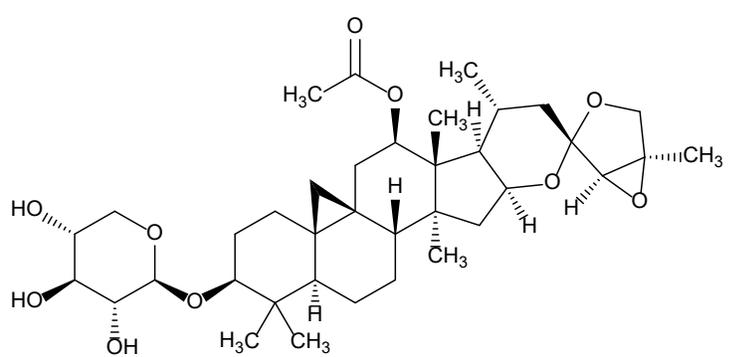
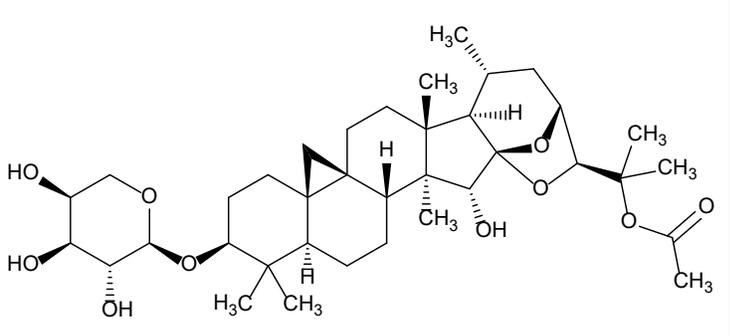
Cimigenol-arabinoside; (3 β ,15 α ,16 α ,23R,24S)-16,23:16,24-Diepoxy-15,25-dihydroxy-9,19-cyclolanostan-3-yl α -L-arabinopyranoside

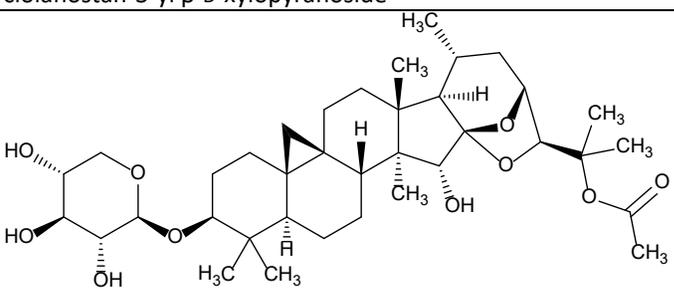
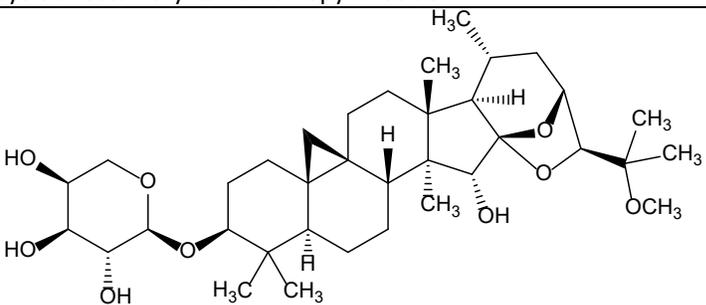
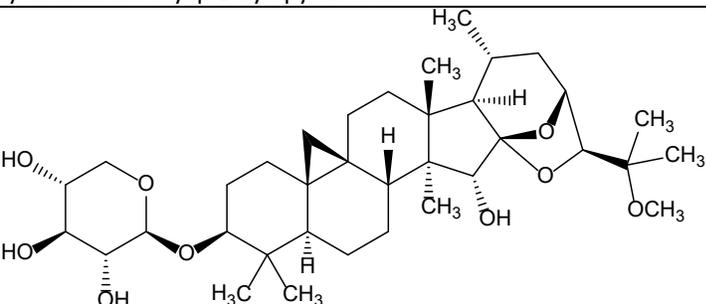


CAS Number: 256925-92-5

Molecular Formula: C₃₅H₅₆O₉

Molecular Weight: 620.82

Cimigenol-xyloside (Cimicifugoside); (3 β ,15 α ,16 α ,23 <i>R</i> ,24 <i>S</i>)-16,23:16,24-Diepoxy-15,25-dihydroxy-9,19-cyclolanostan-3-yl β -D-xylopyranoside	
	CAS Number: 27994-11-2
	Molecular Formula: C ₃₅ H ₅₆ O ₉
	Molecular Weight: 620.82
26-Deoxyactein; (3 β ,12 β ,16 β ,23 <i>S</i> ,24 <i>R</i> ,25 <i>R</i>)-12-(Acetyloxy)-16,23:23,26:24,25-triepoxy-9,19-cyclolanostan-3-yl β -D-xylopyranoside	
	CAS Number: 264624-38-6
	Molecular Formula: C ₃₇ H ₅₆ O ₁₀
	Molecular Weight: 660.85
25-Acetyl-cimigenol-arabinoside; (3 β ,15 α ,16 α ,23 <i>R</i> ,24 <i>S</i>)-25-Acetoxy-16,23:16,24-diepoxy-15-hydroxy-9,19-cyclolanostan-3-yl α -L-arabinopyranoside	
	CAS Number: 256925-93-6
	Molecular Formula: C ₃₇ H ₅₈ O ₁₀
	Molecular Weight: 662.86

(24S)-25-Acetyl-cimigenol-xyloside; (3β,15α,16α,23R,24S)-25-Acetoxy-16,23:16,24-diepoxy-15-hydroxy-9,19-cyclolanostan-3-yl β-D-xylopyranoside	
	CAS Number: 27994-11-2
	Molecular Formula: C ₃₇ H ₅₈ O ₁₀
	Molecular Weight: 662.86
25-O-Methyl-cimigenol-arabinoside; (3β,15α,16α,23R,24S)-16,23:16,24-Diepoxy-15-hydroxy-25-methoxy-9,19-cyclolanostan-3-yl α-L-arabinopyranoside	
	CAS Number: 343249-40-1
	Molecular Formula: C ₃₆ H ₅₈ O ₉
	Molecular Weight: 634.85
25-O-Methyl-cimigenol-xyloside; (3β,15α,16α,23R,24S)-16,23:16,24-Diepoxy-15-hydroxy-25-methoxy-9,19-cyclolanostan-3-yl β-D-xylopyranoside	
	CAS Number: 27994-13-4
	Molecular Formula: C ₃₆ H ₅₈ O ₉
	Molecular Weight: 634.85

Additional Information:

25-O-Methyl-cimigenol-arabinoside and 25-O-Methyl-cimigenol-xyloside peaks are not detected, therefore, not labeled in the Typical chromatogram. Components of interest can be identified by the RRTs as listed in the monograph Table.



LABEL TEXT

For use with specified USP compendial tests. Not for use as a drug. See SDS prior to use at www.usp.org/sds.



Lot: R192M0



REFERENCE STANDARD

POWDERED BLACK COHOSH EXTRACT 1.5 g

Labeled for compendial qualitative use. Keep container tightly closed. Store in a refrigerator. Material is hygroscopic.

See certificate for any additional information.

USP, 12601 Twinbrook Pkwy, Rockville, MD, +1-301-881-0666
Cat. No. 1076206 Material mfd. in Germany

Danielle A. Vattimo

Quality Assurance

Certificate Version History

Version Number	Date	Reasons for Change
00 (Current)	08-AUG-2023	First issue

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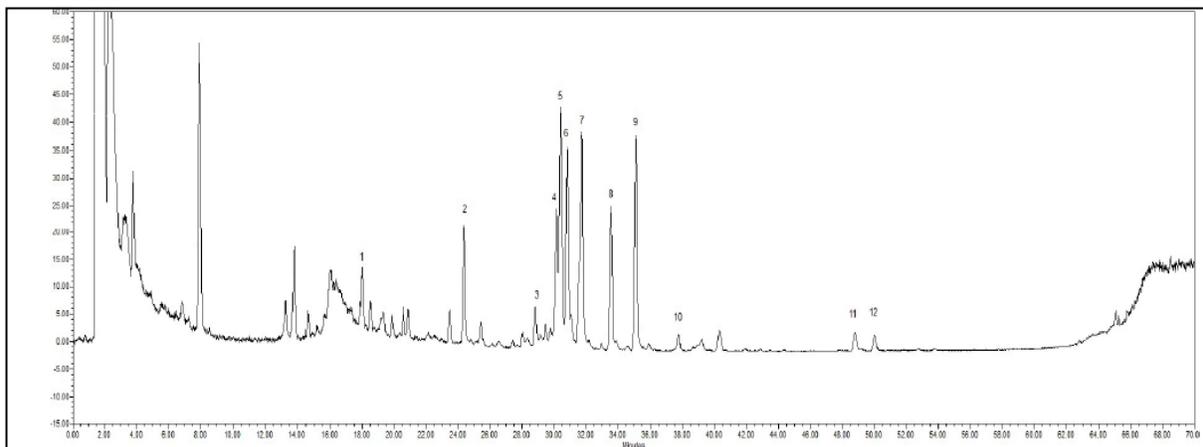
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Typical Chromatogram

USP Powdered Black Cohosh Extract RS

Catalog Number: 1076206
Lot: R192M0
Monograph: Powdered Black Cohosh Extract
Publication: USP-NF 2023, Issue 1
Test: Content of Triterpene Glycosides
Sample: Standard Solution



1. Cimicifugoside H-1
2. Cimracemoside A
3. (26R)-Actein
4. 26-Deoxycimicifugoside
5. (26S)-Actein
6. 23-epi-26-Deoxyactein
7. Acetyl-shengmanol-xyloside
8. Cimigenol-arabinoside
9. Cimigenol-xyloside
10. 26-Deoxyactein
11. 25-Acetyl-cimigenol-arabinoside
12. (24S)-25-Acetyl-cimigenol-xyloside

This chromatogram is supplied for information only, unless otherwise specified in an applicable monograph or general chapter.