

Application Report 230

Analysis of Conjugated Estrogens Using Ascentis™ C18

This application demonstrates the suitability of the Ascentis C18 for the analysis of 13 conjugated estrogens. Structures along with the optimized chromatogram obtained on the Ascentis C18 are presented.

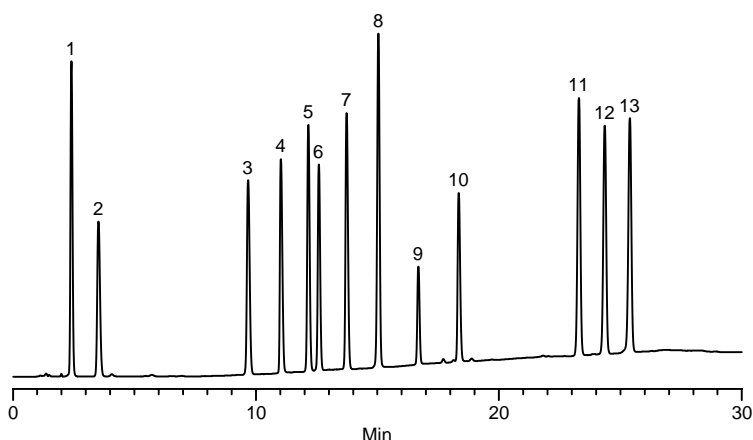
Key Words

Estriol 3-(β -D-glucuronide) sodium salt, E2002, 15087-06-6, β -estradiol 3-(β -D-glucuronide) 17-sulfate dipotassium salt, E2128, 99156-45-3, Estriol 3-sulfate sodium salt, E6375, 5150-64-1, β -estradiol 3,17-disulfate dipotassium salt, E1636, 17046-60-5, β -estradiol 3-(β -D-glucuronide) sodium salt, E2127, 14982-12-8, β -estradiol 17-(β -D-glucuronide) sodium salt, E1127, 15087-02-2, Estrone 3-(β -D-glucuronide) sodium salt, E1752, 15087-01-1, Estriol, E1253, 50-27-1, β -estradiol 3-sulfate sodium salt, E9505, 4999-79-5, Estrone 3-sulfate potassium salt, E9145, 1240-04-6, β -estradiol, Dihydrofolliculin, E8875, 50-28-2, α -estradiol, Epiestradiol, E8750, 57-91-0, Estrone, Folliculin, E9750, 53-16-7, Ascentis C18, 581324-U

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Acquisition System: Mt McKinley
Thermo

Notebook Reference: 1551



G002912

Conditions

column: Ascentis C18, 15 cm x 4.6 mm I.D., 5 μ m particles (581324-U)
mobile phase A: 10 mM potassium phosphate (pH 7.0)
mobile phase B: acetonitrile
mobile phase C: methanol
flow rate: 1.0 mL/min.
temp.: 30 $^{\circ}$ C
det.: UV at 220 nm
injection: 10 μ L
sample: as indicated in 75:25 buffer:methanol
gradient:

Min	%A	%B	%C
0	84	12	4
5	84	12	4
25	40	45	15
30	40	45	15

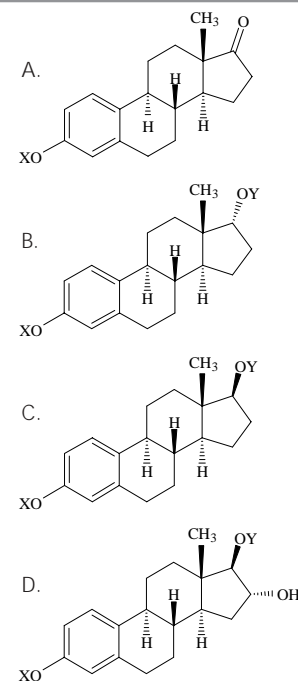
Peak IDs

1. Estriol 3-(β -D-glucuronide) (50 μ g/mL)
2. β -estradiol 3-(β -D-glucuronide) 17-sulfate (50 μ g/mL)
3. Estriol 3-sulfate (50 μ g/mL)
4. β -estradiol 3,17-disulfate (50 μ g/mL)
5. β -estradiol 3-(β -D-glucuronide) (50 μ g/mL)

6. β -estradiol 17-(β -D-glucuronide) (50 μ g/mL)
7. Estrone 3-(β -D-glucuronide) (50 μ g/mL)
8. Estriol (50 μ g/mL)
9. β -estradiol 3-sulfate (50 μ g/mL)
10. Estrone 3-sulfate (50 μ g/mL)
11. β -estradiol (50 μ g/mL)
12. α -estradiol (50 μ g/mL)
13. Estrone (50 μ g/mL)

Structures

- A. Estrone - G002101a
7. Estrone 3-(β -D-glucuronide), X=C₆H₄O₆
10. Estrone 3-sulfate, X=SO₃H
13. Estrone, X=H
- B. α -Estradiol - G002100a
12. α -estradiol, X=H, Y=H
- C. β -Estradiol - G002099a
2. β -estradiol 3-(β -D-glucuronide) 17-sulfate, X=C₆H₄O₆, Y=SO₃H
4. β -estradiol 3,17-disulfate, X=SO₃H, Y=SO₃H
5. β -estradiol 3-(β -D-glucuronide), X=C₆H₄O₆, Y=H
6. β -estradiol 17-(β -D-glucuronide), X=H, Y=C₆H₄O₆
9. β -estradiol 3-sulfate, X=SO₃H, Y=H
11. β -estradiol, X=H, Y=H
- D. Estriol - G002098a
1. Estriol 3-(β -D-glucuronide), X=C₆H₄O₆, Y=H
3. Estriol 3-sulfate, X=SO₃H, Y=H
8. Estriol, X=H, Y=H



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