

# Application Report 84

## Analysis of Estrone, $\beta$ -Estradiol, $\alpha$ -Estradiol, and Estriol Using Ascentis™ C18

This application demonstrates the suitability of Ascentis C18 for the efficient separation of estrone,  $\beta$ -estradiol,  $\alpha$ -estradiol, and estriol by HPLC.

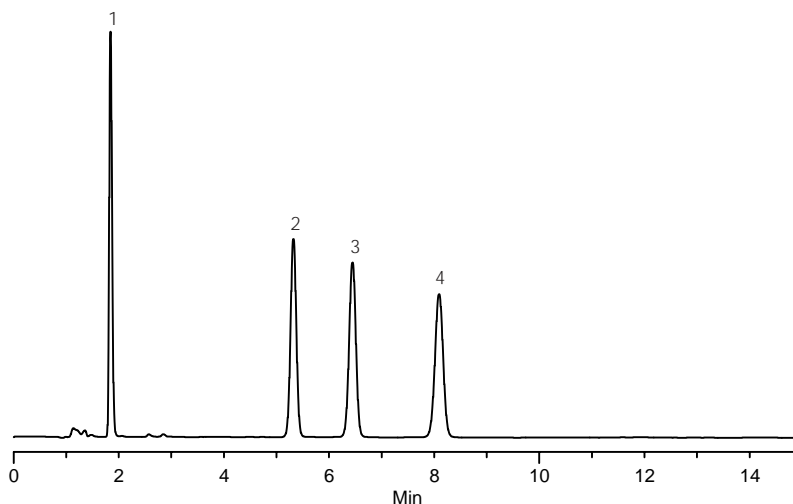
### Key Words

estrone, 1,3,5(10)-estratrien-3-ol-17-one, folliculin, 3-hydroxy-1,3,5(10)-estratrien-17-one, E9750, 53-16-7,  $\beta$ -estradiol, dihydrofolliculin, 3,17 $\beta$ -dihydroxy-1,3,5(10)-estratriene, 17 $\beta$ -estradiol, 1,3,5-estratriene-3,17 $\beta$ -diol, E8875, 50-28-2,  $\alpha$ -estradiol, 3,17 $\alpha$ -Dihydroxy-1,3,5(10)-estratriene, epiestradiol, 1,3,5(10)-estratriene-3,17 $\alpha$ -diol, E8750, 57-91-0, estriol, 1,3,5(10)-estratriene-3,16 $\alpha$ ,17 $\beta$ -triol, 16 $\alpha$ -hydroxyestradiol, 3,16 $\alpha$ ,17 $\beta$ -trihydroxy-1,3,5(10)-estratriene, E1253, C50-27-1, Ascentis C18, 581324-U, Steroids, Estrogens

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Acquisition System: Waters Alliance  
2690 ID 9371

Notebook Reference: 1495-42



G002330

### Conditions

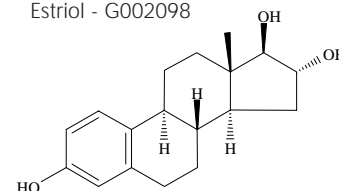
column: Ascentis C18, 15 cm x 4.6 mm I.D., 5  $\mu$ m particles (581324-U)  
mobile phase: 55:45, water:acetonitrile  
flow rate: 1 mL/min.  
temp.: 35  $^{\circ}$ C  
det.: UV at 220 nm  
injection: 10  $\mu$ L  
sample: as indicated in 55:45, water:acetonitrile

### Peak IDs

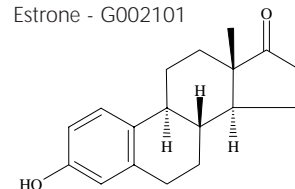
1. Estriol (50  $\mu$ g/mL)
2.  $\beta$ -estradiol (50  $\mu$ g/mL)
3.  $\alpha$ -estradiol (50  $\mu$ g/mL)
4. Estrone (50  $\mu$ g/mL)

### Structures

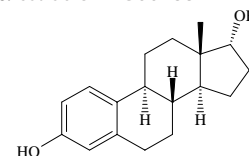
Estriol - G002098



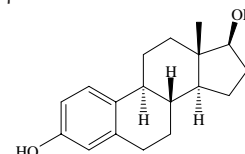
Estrone - G002101



$\alpha$ -estradiol - G002331



$\beta$ -estradiol - G002332



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