

Name: Ethynyl Estradiol Dimer 2

Lot#: GR-9-283

Test Date: 02/01/2021 (re-test date: 02/01/2026)

CAS No.: 303014-91-7

MF: C₄₀H₄₆O₄

MW: 590.80

Appearance: White solid

Purity: 94.8% by HPLC (average of two sample preparations)

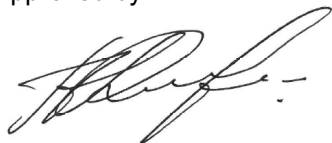
¹H-NMR: Conforms

MS-ESI (-) Conforms (shows peak at m/z = 589.48 [M-H]⁻)

Storage Store at 0-5°C in a dry place away from direct sunlight

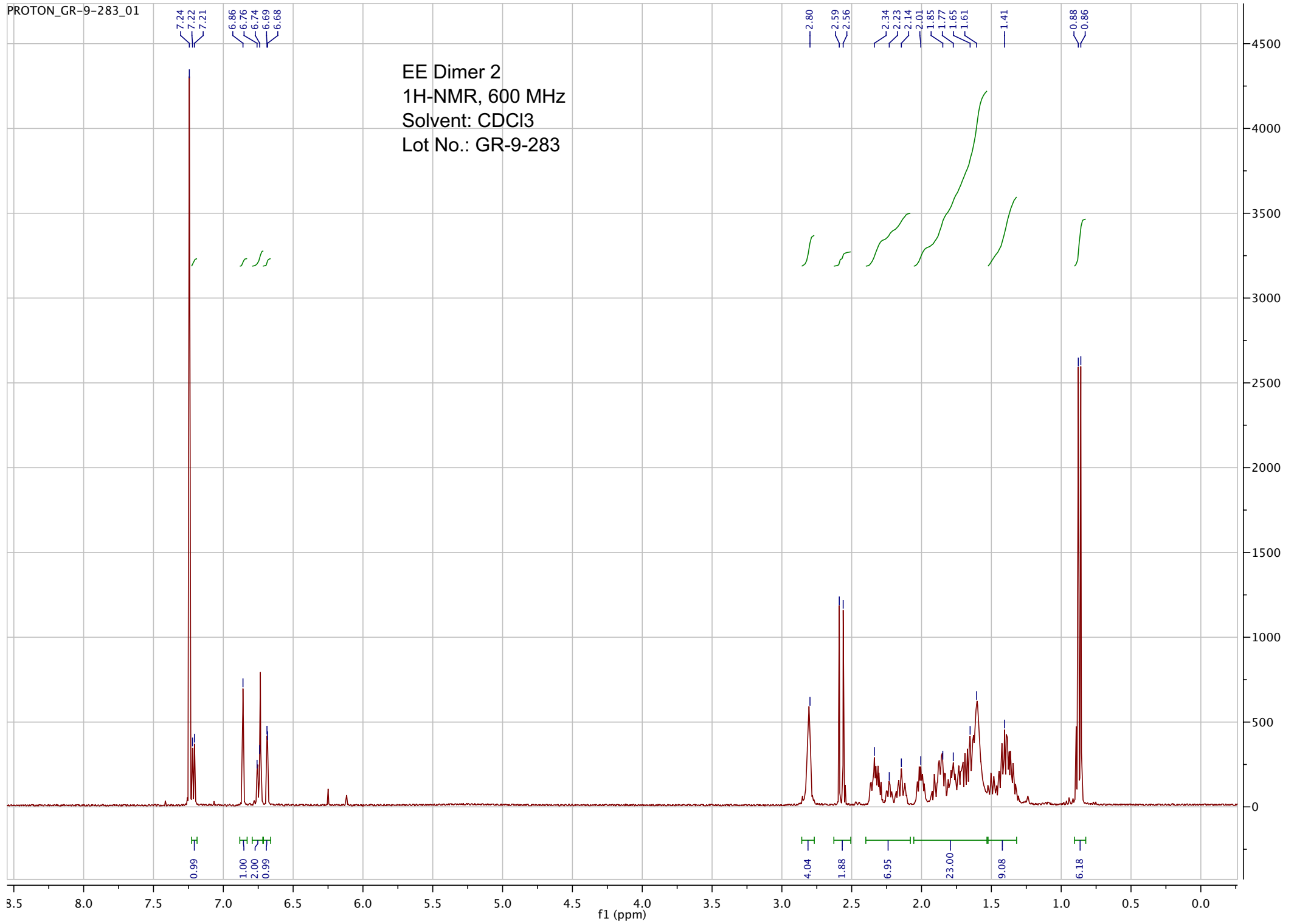
Approved by:

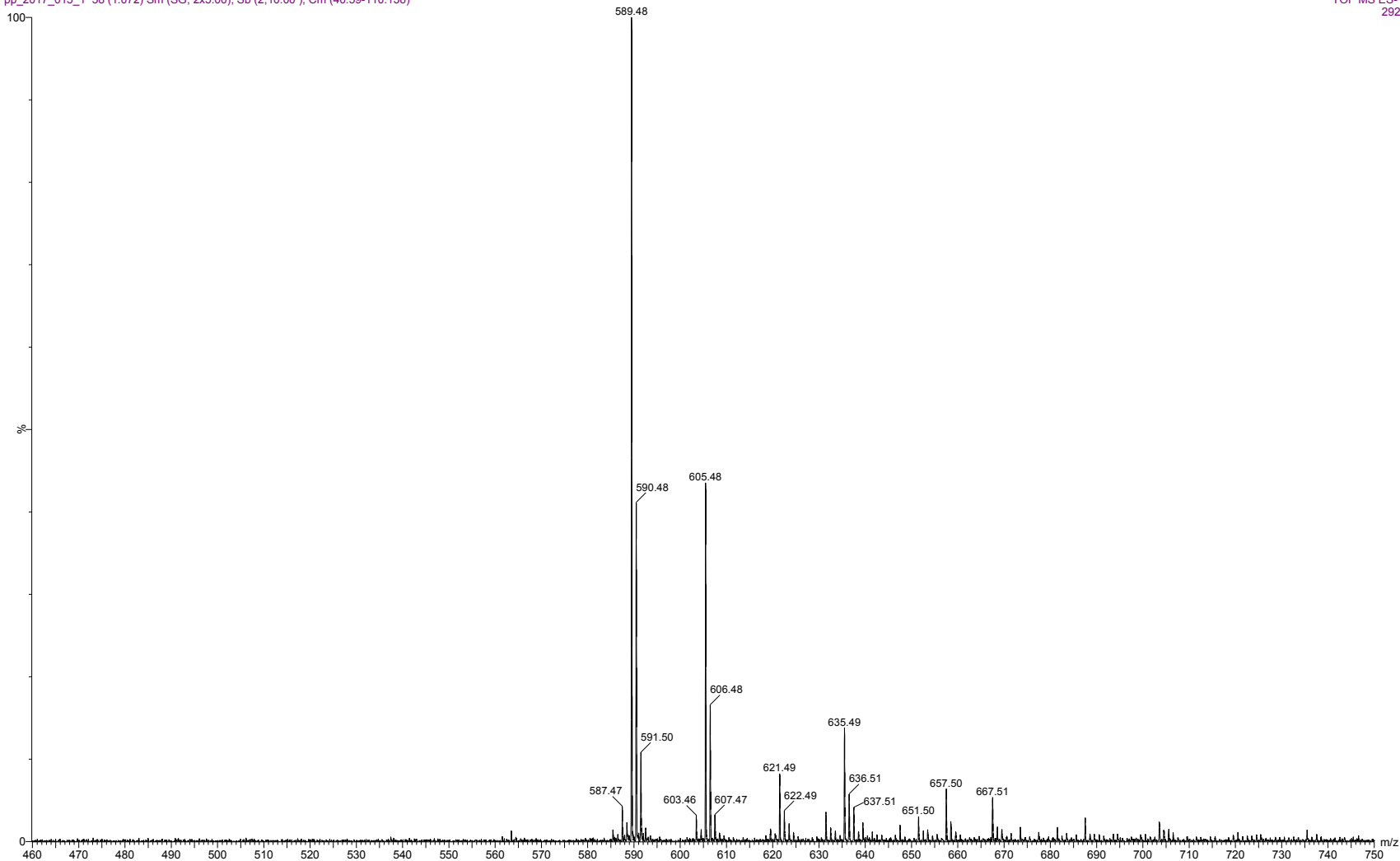
Date: 02/01/2021



Viorica Rusu, QC/QA Manager

EE Dimer 2
1H-NMR, 600 MHz
Solvent: CDCl3
Lot No.: GR-9-283

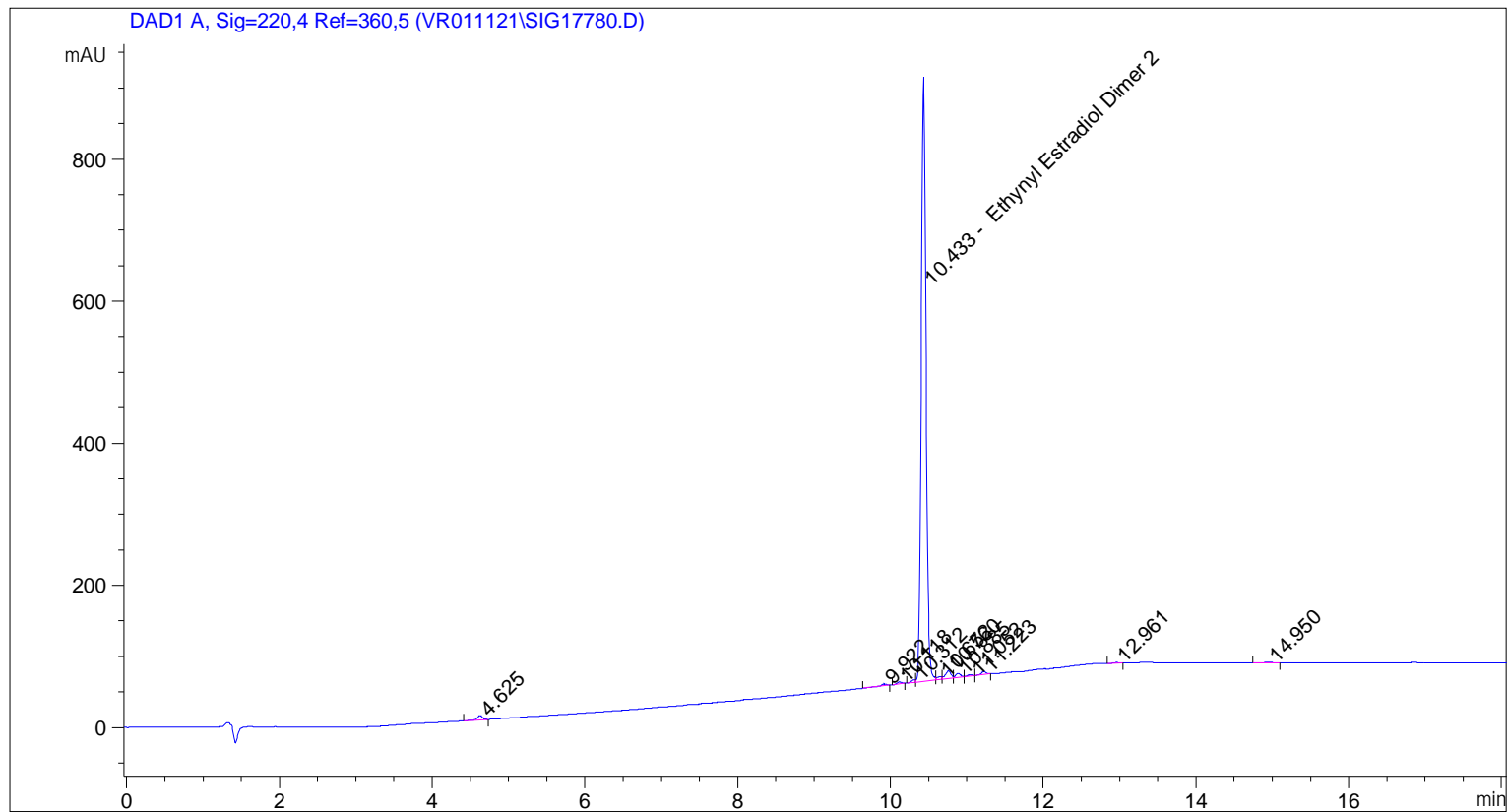




ESI-MS spectrum for sample GR-9-283. Shows monoisotopic [M-H]- mass.

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Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 14
Injection Date  : 2/1/2021 9:39:07 AM
                                           Inj Volume : 4.0 µl
Acq. Method     : C:\CHEM32\1\METHODS\VR020121_283.M
Last changed    : 2/1/2021 9:38:08 AM by vrusu
Analysis Method  : C:\CHEM32\1\METHODS\VR020121_283PM.M
Last changed    : 2/1/2021 1:23:31 PM by vrusu
  
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 Area Percent Report
 =====

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Sorted By           :      Signal
Calib. Data Modified :      2/1/2021 1:10:54 PM
Multiplier:         :      1.0000
Dilution:           :      1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: DAD1 A, Sig=220,4 Ref=360,5

| Peak # | RetTime [min] | Type | Width [min] | Area [mAU*s] | Area % | Name |
|--------|---------------|------|-------------|--------------|---------|---------------------------|
| 1 | 4.625 | BB | 0.0738 | 28.59048 | 0.7296 | ? |
| 2 | 9.922 | BB | 0.0710 | 11.09961 | 0.2832 | ? |
| 3 | 10.118 | BB | 0.0670 | 12.06328 | 0.3078 | ? |
| 4 | 10.312 | BV | 0.0530 | 13.50535 | 0.3446 | ? |
| 5 | 10.433 | VV | 0.0690 | 3720.90698 | 94.9499 | Ethynyl Estradiol Dimer 2 |
| 6 | 10.652 | VV | 0.0661 | 16.37642 | 0.4179 | ? |
| 7 | 10.760 | VV | 0.0750 | 53.01193 | 1.3528 | ? |
| 8 | 10.885 | VB | 0.0693 | 23.32470 | 0.5952 | ? |

Sample Name: GR-9-283

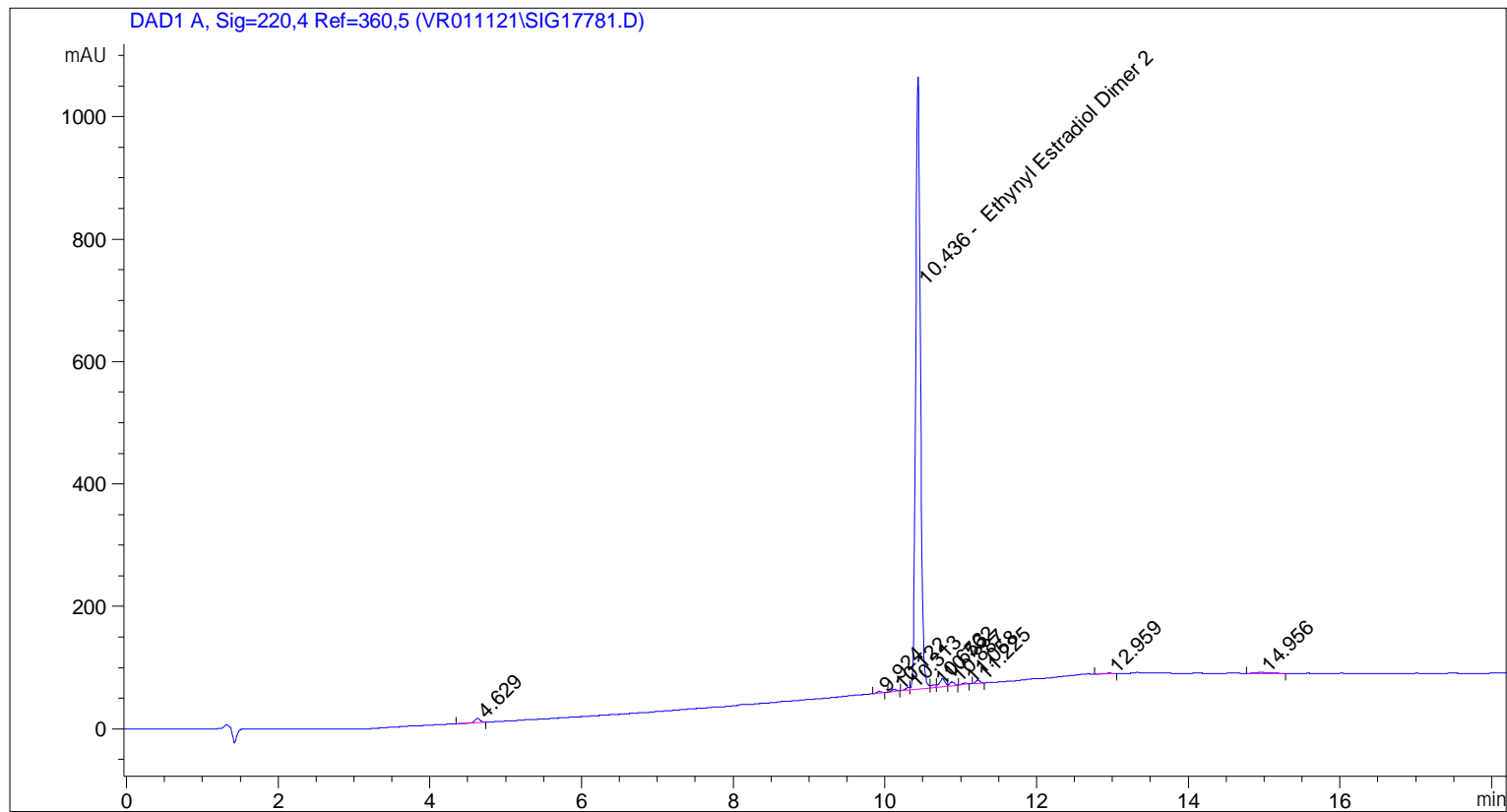
| Peak # | RetTime [min] | Type | Width [min] | Area [mAU*s] | Area % | Name |
|--------|---------------|------|-------------|--------------|--------|------|
| 9 | 11.052 | BV | 0.0783 | 7.68820 | 0.1962 | ? |
| 10 | 11.223 | VB | 0.0638 | 17.93069 | 0.4576 | ? |
| 11 | 12.961 | BB | 0.0781 | 5.05441 | 0.1290 | ? |
| 12 | 14.950 | BB | 0.1040 | 9.25751 | 0.2362 | ? |

Totals : 3918.80958

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*** End of Report ***

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=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 15
Injection Date  : 2/1/2021 10:04:36 AM
                                           Inj Volume : 4.0 µl
Acq. Method     : C:\CHEM32\1\METHODS\VR020121_283.M
Last changed    : 2/1/2021 10:03:42 AM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR020121_283PM.M
Last changed    : 2/1/2021 1:25:23 PM by vrusu
  
```



Area Percent Report

```

Sorted By           : Signal
Calib. Data Modified : 2/1/2021 1:10:54 PM
Multiplier:         : 1.0000
Dilution:           : 1.0000
Use Multiplier & Dilution Factor with ISTDs
  
```

Signal 1: DAD1 A, Sig=220,4 Ref=360,5

| Peak # | RetTime [min] | Type | Width [min] | Area [mAU*s] | Area % | Name |
|--------|---------------|------|-------------|--------------|---------|---------------------------|
| 1 | 4.629 | BB | 0.0728 | 34.67197 | 0.7493 | ? |
| 2 | 9.924 | BB | 0.0679 | 12.40543 | 0.2681 | ? |
| 3 | 10.122 | BB | 0.0686 | 14.79096 | 0.3197 | ? |
| 4 | 10.313 | BV | 0.0543 | 15.87781 | 0.3432 | ? |
| 5 | 10.436 | VV | 0.0692 | 4383.70801 | 94.7407 | Ethynyl Estradiol Dimer 2 |
| 6 | 10.653 | VV | 0.0664 | 19.03703 | 0.4114 | ? |
| 7 | 10.762 | VV | 0.0762 | 65.35538 | 1.4125 | ? |
| 8 | 10.887 | VB | 0.0684 | 26.89505 | 0.5813 | ? |

Sample Name: GR-9-283 spl-2

| Peak # | RetTime [min] | Type | Width [min] | Area [mAU*s] | Area % | Name |
|--------|---------------|------|-------------|--------------|--------|------|
| 9 | 11.058 | BB | 0.0716 | 8.31358 | 0.1797 | ? |
| 10 | 11.225 | BB | 0.0643 | 20.19753 | 0.4365 | ? |
| 11 | 12.959 | BB | 0.0866 | 7.28886 | 0.1575 | ? |
| 12 | 14.956 | BB | 0.1474 | 18.51826 | 0.4002 | ? |

Totals : 4627.05988

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*** End of Report ***