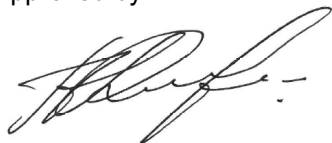


Name:	Estradiol-D4
Lot#:	GR-11-099
Test Date:	02/07/2023 (re-test date: 02/07/2028)
CAS No.:	66789-03-5
MF:	C ₁₈ H ₂₂ D ₄ O ₂
MW:	276.41
Appearance:	Off-white solid
Purity:	99.1% by HPLC; >98% atom D
¹H-NMR:	Conforms
MS-ESI (-)	Conforms (shows peak at m/z = 275.20 [M-H] ⁻)
Storage	Store at -18°C in a dry place away from direct sunlight

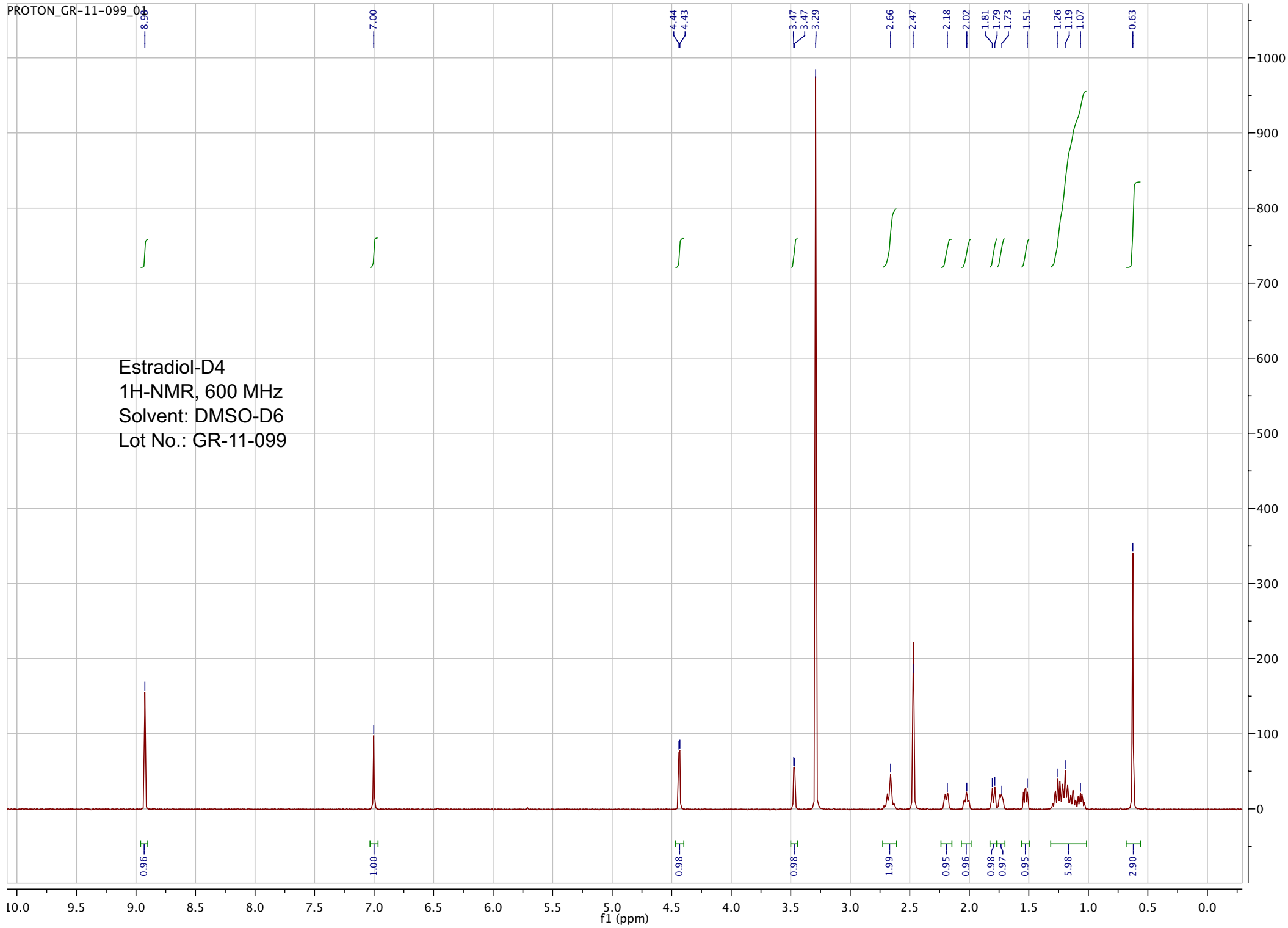
Approved by:

Date: 02/07/2023



Viorica Rusu, QC/QA Manager

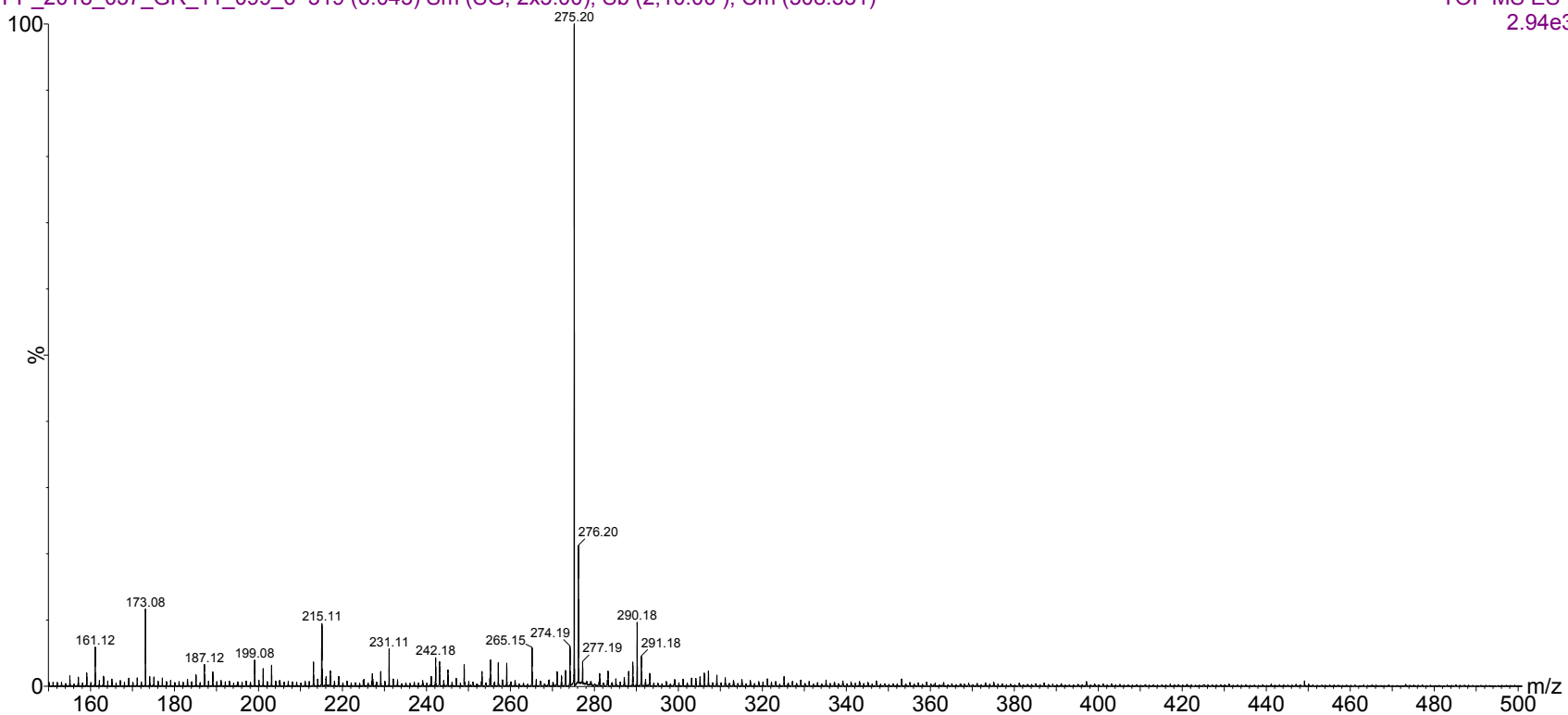
Estradiol-D4
 1H-NMR, 600 MHz
 Solvent: DMSO-D6
 Lot No.: GR-11-099



05-Apr-2018, 16:06:48

TOF MS ES-
2.94e3

PP_2018_037_GR_11_099_6 319 (6.043) Sm (SG, 2x5.00); Sb (2,10.00); Cm (308:331)

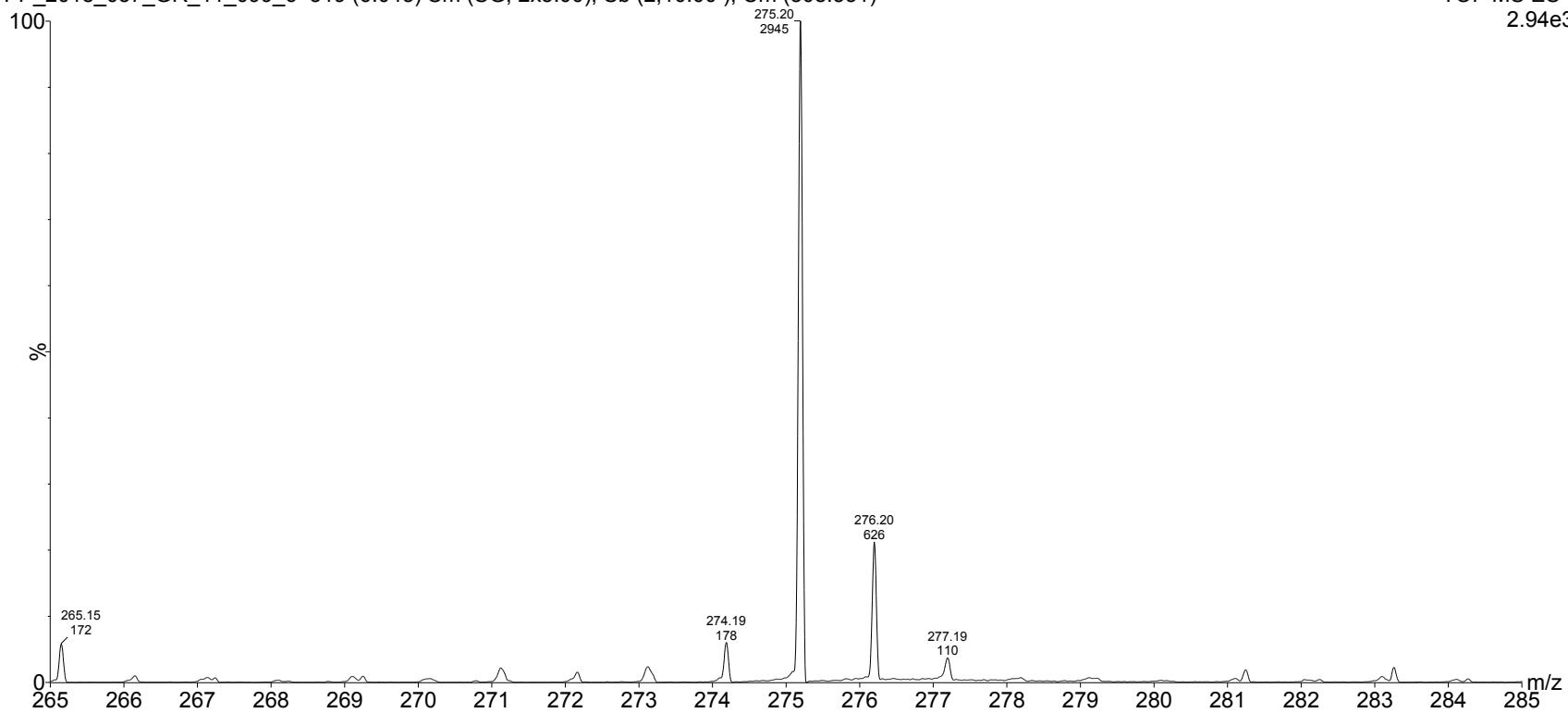


ESI-MS spectrum for sample GR-11-099 Second sample. Shows monoisotopic [M+H]⁺ mass.

05-Apr-2018, 16:06:48

TOF MS ES-
2.94e3

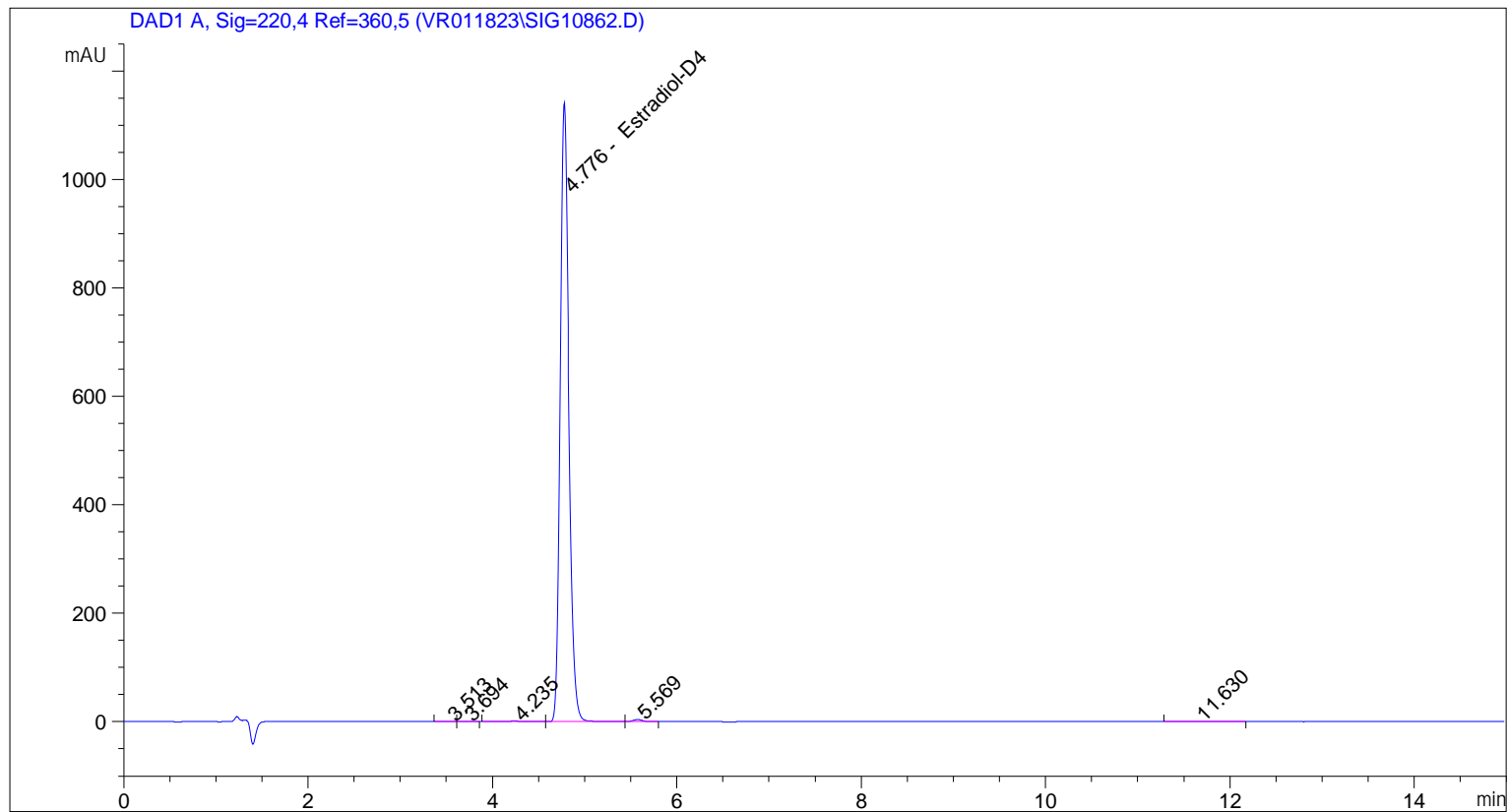
PP_2018_037_GR_11_099_6 319 (6.043) Sm (SG, 2x5.00); Sb (2,10.00); Cm (308:331)



Expansion of above showing intensity labels.

```

=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 8
Injection Date  : 2/7/2023 1:54:01 PM
                                           Inj Volume : 10.0 µl
Acq. Method    : C:\CHEM32\1\METHODS\VR020723_099.M
Last changed   : 2/7/2023 1:53:05 PM by vrusu
Analysis Method : C:\CHEM32\1\METHODS\VR020723_099PM.M
Last changed   : 2/7/2023 2:34:19 PM by vrusu
  
```



=====
 Area Percent Report
 =====

```

Sorted By           :      Signal
Calib. Data Modified :      2/7/2023 2:31:05 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	3.513	BV	0.0892	5.36869	0.0710	?
2	3.694	VB	0.0973	5.48040	0.0725	?
3	4.235	BV	0.1347	13.02200	0.1722	?
4	4.776	VV	0.1005	7495.93750	99.1309	Estradiol-D4
5	5.569	VB	0.1086	27.68747	0.3662	?
6	11.630	BB	0.2069	14.15749	0.1872	?

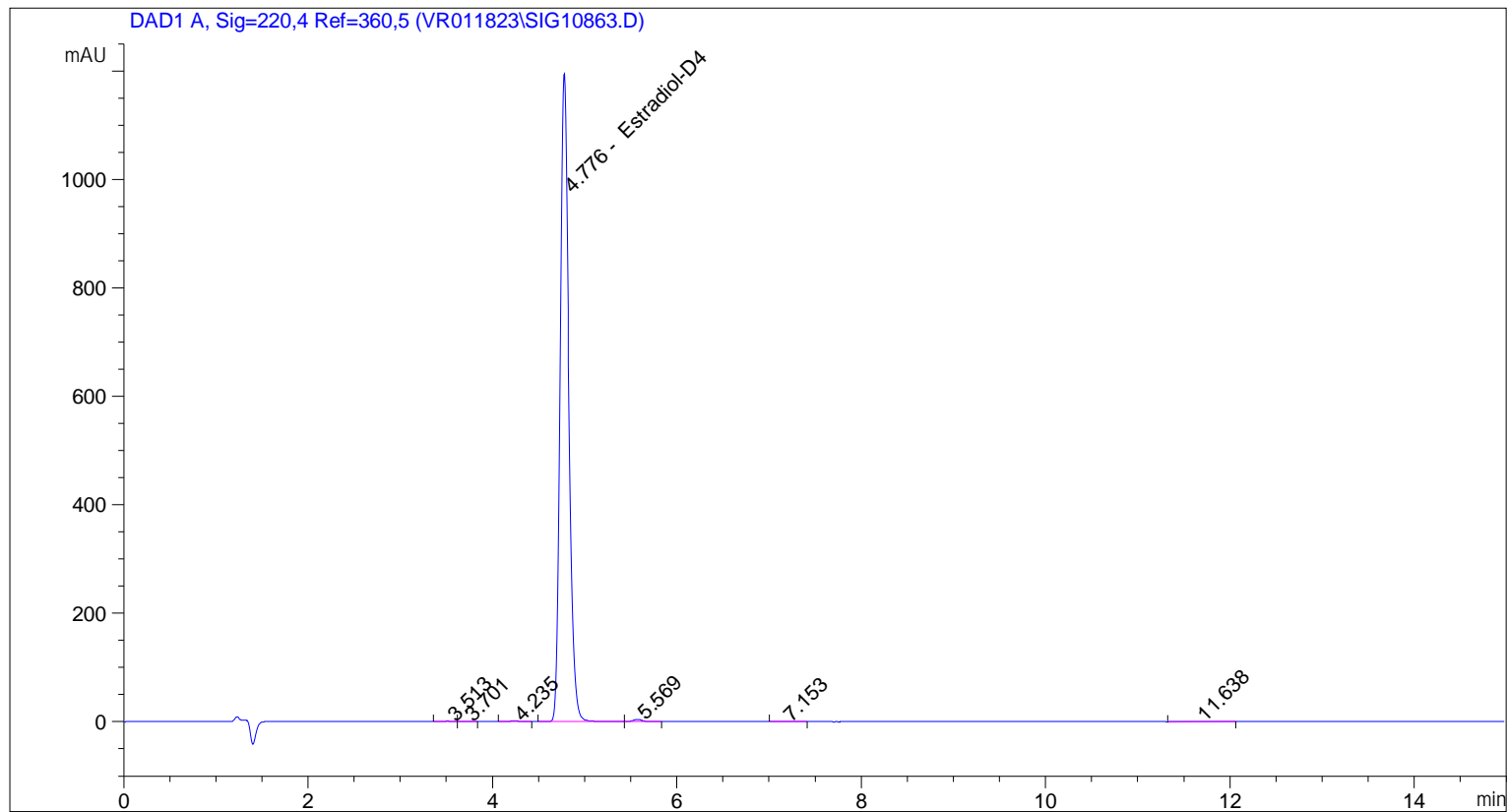
Totals : 7561.65355

=====

*** End of Report ***

```

=====
Acq. Operator   : vrusu
Acq. Instrument : Instrument 1                Location : Vial 9
Injection Date  : 2/7/2023 2:12:04 PM
                                           Inj Volume : 10.0 µl
Acq. Method    : C:\CHEM32\1\METHODS\VR020723_099.M
Last changed   : 2/7/2023 2:11:04 PM by vrusu
Analysis Method: C:\CHEM32\1\METHODS\VR020723_099PM.M
Last changed   : 2/7/2023 2:34:19 PM by vrusu
  
```



=====
 Area Percent Report
 =====

```

Sorted By      : Signal
Calib. Data Modified : 2/7/2023 2:31:05 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	3.513	BV	0.0892	6.80931	0.0857	?
2	3.701	VB	0.0913	3.87641	0.0488	?
3	4.235	BB	0.1099	9.57088	0.1205	?
4	4.776	BV	0.1008	7875.79590	99.1283	Estradiol-D4
5	5.569	VB	0.1082	30.33156	0.3818	?
6	7.153	BB	0.1257	3.19794	0.0403	?
7	11.638	BB	0.2111	15.47178	0.1947	?

Sample Name: GR-11-099 spl-2

Totals : 7945.05379

=====

*** End of Report ***