Supporting material

Tetraoxanes as inhibitors of Apicomplexan parasites *Plasmodium falciparum* and *Toxoplasma gondii* and anti-cancer molecules

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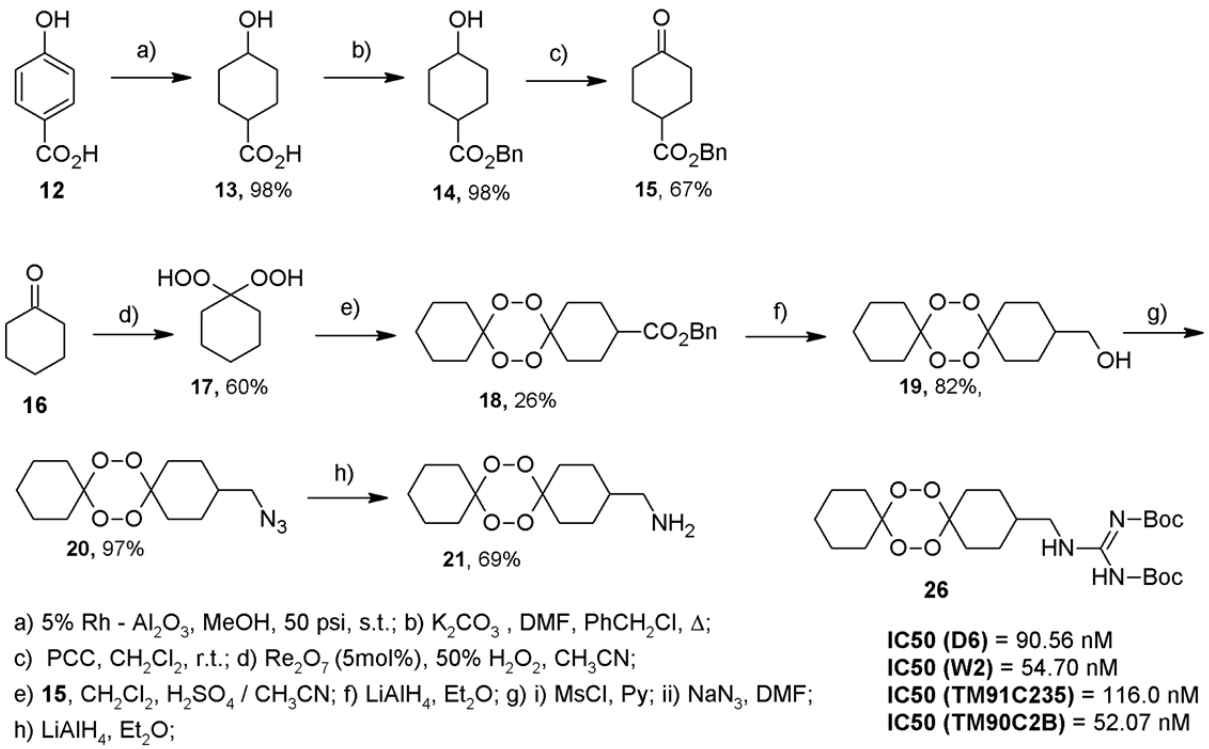
Scheme S1



a) 5% Rh - Al_2O_3, MeOH, 50 psi, s.t.; b) K_2CO_3 , DMF, $PhCH_2Cl$, Δ;
c) PCC, CH_2Cl_2, r.t.; d) Re_2O_7 (5mol%), 50% H_2O_2, CH_3CN;
e) **15**, CH_2Cl_2, H_2SO_4 / CH_3CN; f) $LiAlH_4$, Et_2O; g) i) MsCl, Py; ii) NaN_3, DMF;
h) $LiAlH_4$, Et_2O;

IC50 (D6) = 90.56 nM
IC50 (W2) = 54.70 nM
IC50 (TM91C235) = 116.0 nM
IC50 (TM90C2B) = 52.07 nM

Scheme S1: Reaction pathway for synthesis of derivative **21**.

Table 1S. Calculated pKa and logP values for derivatives 21, 22 and 23.[a]

Compound	**21**	**22**	**23**
pKa	10.16	12.08	12.14
logP	1.70	3.12	1.63

[a] For pKa calculations Epik, version 2.9, Schrödinger, LLC, New York, NY, 2014. Were used. For log P calculations QikProp, version 4.1, Schrödinger, LLC, New York, NY, 2014 were used.

Synthesis

4-hydroxycyclohexanecarboxylic acid (13) [1]

Mixture of 4-hydroxybenzoic acid (15.0 g, 108.6 mmol) and 5% Rh-Al_2O_3 (1g) in MeOH (100 mL) was shaken in Parr-shaker in hydrogen atmosphere (50 psi) at r.t. After 24 hours hydrogen was exchanged with Ar, mixture was filtered through celite and solvent was removed under reduce pressure. Product was obtained as mixture of *cis*/*trans* isomers. Yield 15.39 g (98 %), m.p. = 120 - 123 ^oC. (lit. t.t. = 126 - 128 ^oC). IR (ATR): 3437s, 2934s, 2857m, 2601w, 1702s, 1443w, 1368w, 1312m, 1242w, 1203w, 1058m, 1026w, 949w, 913w, 736w, 587w cm^{-1}. ^{1}H-NMR (200 MHz, $CDCl_3$, δ): 4.52 (bs, OH), 3.98 – 3.84 (m, H_e-COH), 3.72 – 3.54 (m, H_a-COH), 2.54 – 2.16 (m), 2.14 – 1.86 (m), 1.84 – 1.60 (m), 1.58 -1.16 (m).

Benzyl 4-hydroxycyclohexanecarboxylate (14)[2]

Obtained as cis/trans mixture with 2:1 ratio of axial:equatorial hydroxyl group (1H NMR). Mixture of **13** (10.0 g, 69.4 mmol) and anhydrous K_2CO_3 (19.1 g, 138.2 mmol) in DMF (18 mL) was warmed to 55 ^oC and benzyl chloride (10.48 mL, 90.8 mmol) was added in drops and stirring was continued at same temperature. After 12 hours reaction was cooled to room temperature, water (25 mL) was added and mixture was extracted with CH_2Cl_2 (4 × 30 mL). Combined organic layers were washed once with sat. $NaHCO_3$ (15 mL), once with brine (15 mL) and dried over anh. Na_2SO_4. Crude product (white powder, 49.28 g) was used without further purification in next reaction step. Analytical sample was obtained after column chromatography purification (flash, SP Biotage, SiO_2-column, Flash 12+M, Hexane/EtOAc =

6:4). IR (ATR): 3405m, 3033w, 2938s, 2863w, 1732s, 1496w, 1454w, 1385m, 1311w, 1236m, 1169s, 1136w, 1070m, 1033m, 967m, 907w, 749m, 699m cm^{-1}. ^{1}H-NMR (200 MHz, $CDCl_3$, δ): 7.40-7.30 (m, 5H-Ar), 5.12 (s, Ar-CH_2), 3.95 – 3.85 (m, H_e-COH), 2.52-2.36 (m, H_a-CO_2Bz), 2.12-1.86 (m, 3H), 1.80-1.52 (m, 5H). ^{13}C-NMR (50 MHz, $CDCl_3$, δ): 175.10, 136.14, 128.51, 128.11, 127.98, 66.77, 66.04, 41.26, 31.94, 23.58.

Benzyl-4-oxocyclohexanecarboxylate (15)[2, 3]

Mixture of alcohol **14** (25.0 g, 106.7 mmol) and PCC (34.44 g, 160.0 mmol) in CH_2Cl_2 (150 L) was stirred at r.t 2 hours. Suspension was transferred on SiO_2 column and product was collected after eluting with CH_2Cl_2 (600 mL). Solvent was removed under reduce pressure and product was obtained after column chromatography purification (flash, SP Biotage, SiO_2-column, 40+M, eluent hexane / EtOAc gradient 85/15 → 7/3) as pale green-yellow oil. Yield 9.57g (67%) IR (ATR): 3033w, 2954m, 1710s, 1453m, 1384m, 1303m, 1210s, 1158s, 1028w, 1004m, 965w, 746s, 698s, 495w, 421w cm^{-1}. ^{1}H-NMR (200 MHz, $CDCl_3$, δ): 7.36 (s, Ar), 5.16 (s, Ar-CH_2), 2.90-2.70 (m, H_a-CO_2Bz), 2.56-1.92 (m, 8H). ^{13}C-NMR (50 MHz, $CDCl_3$, δ): 210.02, 173.94, 135.72, 128.62, 128.36, 128.13, 66.49, 40.62, 39.62, 28.42.

Cyclohexane-1,1-diyl dihydroperoxide (**17)**

Into mixture of cyclohexanone (980.0 mg, 10.0 mmol) and Re_2O_7 (242.2 mg, 0.5 mmol, 5 mol %) in CH_3CN (25mL), 50% solution of H_2O_2 (1.12 mL, 40.0 mmol) was added and stirring was continued at r.t. 1 hour. Reaction was transferred on the SiO_2 column and was eluted with EtOAc. Fractions with crude product were combined, washed once with brine and dried over anh. Na_2SO_4 at 0 ^{o}C. Solvent was removed under reduce pressure and product was isolated after column chromatography (Lobar, SiO_2-column C, eluent hexane / EtOAc = 7/3). Yield 890.2 mg (60%), colourless oil. IR (film): 3419s, 2946s, 2863s, 1712m, 1634w, 1454s, 1391s, 1278m, 1161m, 1098m, 1064s, 947m, 927m, 849m cm^{-1}. IR(CCl_4): 3424s, 2948s, 2865s, 1746m, 1722m, 1452s, 1393s, 1349m, 1162s, 951s, 922m cm^{-1}. ^{1}H-NMR (200 MHz, $CDCl_3$, δ): 9.60 (bs, 2 × HOO-C(1)), 2.0 – 1.8 (m, 4 H), 1.6 – 1.4 (m, 6 H). ^{13}C-NMR (50 MHz, $CDCl_3$, δ): 110.94, 29.41, 25.18, 22.31.

7,8,15,16-tetraoxadispiro[5.2.5.2]hexadec-3-yl methanol (19)[4]

Flame dried two-neck round bottom flask was charged, under Ar atmosphere, with $LiAlH_4$ (280.0 mg, 7.3 mmol) and dry THF-u (20 mL), and solution of ester **18** (2.4 g, 4.55 mmol) in dry THF (20 mL) was added dropwise under intensive stirring, at r.t. After 2 hours reaction

was quenched with EtOAc, water was added and emulsion was transferred into separatory funnel. Water layer was acidified (pH = 2) with dilute HCl (1:1, v/v), layers were separated and water layer was extracted with EtOAc (3 × 20 mL). Combined organic layer were dried over anh. Na_2SO_4, solvent was removed under reduce pressure and product was isolated after column chromatography purification (dry-flash, SiO_2-column, eluent heptane / EtOAc = 8 / 2). Yield 1.4 g (82%). Colourless foam, softens at 116 -118 ^oC. IR (KBr): 3320m, 3009w, 2940s, 2861s, 1443m, 1360w, 1339w, 1310w, 1273w, 1250w, 1159w, 1094w, 1068m, 1045m, 984w, 941w, 918m, 897w, 881w, 850w cm^{-1}. ^1H NMR (500 MHz, $CDCl_3$, δ):): 3.5 (d, J = 6.2 Hz, CH_2-OH), 3.12 (bs, 1H), 2.45-2.15 (m, 2H), 1.85-1.70 (m, 3H), 1.70-1.35 (m, 12H), 1.35-1.20 (m, 2H). ^{13}C NMR (125 MHz, $CDCl_3$, δ): 108.29, 108.16, 67.41, 39.44, 31.80, 30.90, 29.52, 28.53, 25.35, 24.95, 24.45, 22.17, 21.88. (+)ESI-HRMS (m/z): Calculated for $[M + NH_4]^+$ 276.18055, found 276.18041. Combustion analysis ($C_{13}H_{22}O_5$): Calculated C 60.45, H 8.58, found C 60.47, H 8.18.

3-(Azidomethyl)-7,8,15,16-tetraoxadispiro[5.2.5.2]hexadekane (20)[4]

Into solution of **19** (1.38 g, 5.34 mmol) in dry Py (11 mL) methanesulfonyl chloride (495 μL, 6.4 mmol) was added at r.t. under intensive stirring. After 2 hours, reaction was quenched with water / EtOAc mixture, transferred into separatory funnel. Water layer was acidified (pH = 5) with dilute HCl (1:1, v/v), layers were separated and water layer was extracted with EtOAc (4 × 25 mL). Combined organic layer were dried over anh. Na_2SO_4, filtered of and solvent was removed under reduce pressure. Obtained crude product was used in next reaction step without further purification. Mixture of mesylate and NaN_3 (3.47 g, 53.4 mmol) in DMF (20 mL) was stirred at 50 ^oC over 12 hours, cooled at r.t. and poured in to EtOAc / water mixture. Layers were separated and water layer was extracted with EtOAc (4 × 25 mL). Combined organic layers were washed with brine (2 × 25 mL), dried over anh. Na_2SO_4, filtered of and solvent was removed under reduce pressure. Product was isolated after column chromatography purification (dry-flash, SiO_2-column, eluent heptane / EtOAc = 9 / 1). Yield 1.45 g (97%). Colourless foam softens at 86-87 ^oC. Spectra are in accordance to literature data. IR (KBr): 2993w, 2946m, 2868w, 2096s, 1714w, 1445m, 1358w, 1338w, 1292m, 1258m, 1213w, 1183w, 1183w, 1155w, 1137w, 1091w, 1067w, 1047m, 1016w, 952w, 915m, 883w, 850w, 817w cm^{-1}.^1H NMR (200 MHz, $CDCl_3$, δ): 3.18 (d, J = 6.2 Hz CH_2, 2 H), 3.14 (bs, 1 H), 2.27 (bs, 2 H), 1.80 – 1.26 (m, 16 H). ^{13}C NMR (50 MHz, $CDCl_3$, δ): 108.39, 107.73, 56.74, 37.04, 31.65, 30.81, 29.48, 28.46, 25.29, 22.05. HPLC purity: method A: RT 3.140, area 96.998 %; method B: RT 1.371, area 96.81 %.

1-(7,8,15,16-Tetraoxadispiro[5.2.5.2]hexadec-3-yl)methanamine (21)[4]

Flame dried two-neck round bottom flask was charged, under Ar atmosphere, with $LiAlH_4$ (217.8 mg, 5.74 mmol) and dry diethyl ether (15 mL), and solution of azide **20** (1.18 g, 4.16 mmol) in dry diethyl ether (15 mL) was added dropwise under intensive stirring, at r.t. After 1 hour reaction was quenched with water and 10 % NaOH solution, K,Na-tartarate (4.8 g, 17.22 mmol, 3 eq. calculated to $LiAlH_4$) was added and mixture was stirred at r.t. until organic layer become clear (12 – 15 hours. Layers were separated, water layer was extracted with diethyl ether (3 × 25 mL) and combined organic layer were washed with brine (2 × 15 mL) and dried over anh. Na_2SO_4. Mixture was filtered of, solvent was removed under reduce pressure and product was isolated after column chromatography purification (dry-flash, SiO_2-column, eluent EtOAc / MeOH / NH_{3aq} = 8 / 1 / 1). Yield 0.4g (69 %) as pale yellow amorphous powder, mp. 75-77 ^oC. Spectra were in accordance to literature data. IR (KBr): 3378m, 3340m, 3010w, 2941s, 2862s, 1720w, 1443m, 1362w, 1341w, 1275w, 1253w, 1160w, 1096w, 1069m, 1049m, 984w, 942w, 919m, 896w, 851w, 824w cm^{-1}. ^1H NMR (200 MHz, $CDCl_3$, δ): 3.11 (bs, 1H) 2.58 (d, J = 6.0 Hz, CH_2-NH_2), 2.26 (bs, 2H), 1.90-1.11 (m, 18 H). ^{13}C NMR (50 MHz, $CDCl_3$, δ): 108.26, 47.58, 40.20, 31.68, 31.0, 29.52, 28.73, 25.78, 25.31, 21.96. HPLC purity: method A: RT 3.139, area 97.24 %; method B: RT 1.369, area 96.93 %.

References

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2. S. D. Kuduk, R. K. Chang, R. M. DiPardo, C. N. Di Marco, K. L. Murphy, R. W. Ransom, D. R. Reiss, C. Tang, T. Prueksaritanont, D. J. Pettibone, M. G. Bock, *Bioorg. Med. Chem. Lett.*, **18** (2008) 5107

3. A. Bahadoor, A. C. Castro, L. K. Chan, F. G. Keaney, M. Nevalainen, V. Nevalainen, S. Peluso, D. A. Snyder, T. T. Tibbitts, WO 2011/140190 Al

4. Igor Opsenica, Dejan Opsenica, Kirsten S. Smith, Wilbur K. Milhous, Bogdan A. Šolaja, *J. Med. Chem.,* **51** (2008) 2261.

Sample Name: JR03

Compound 18; Method A

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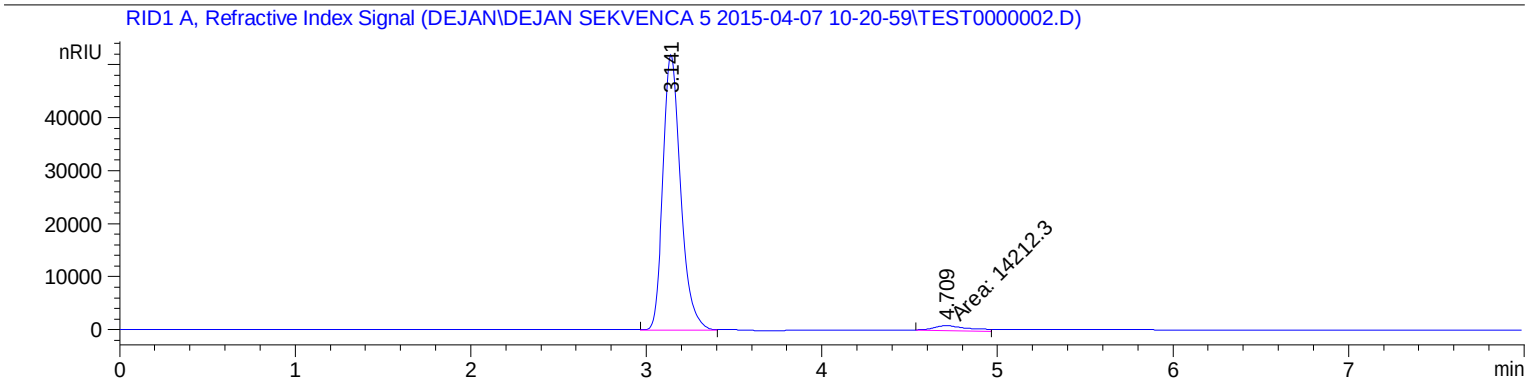


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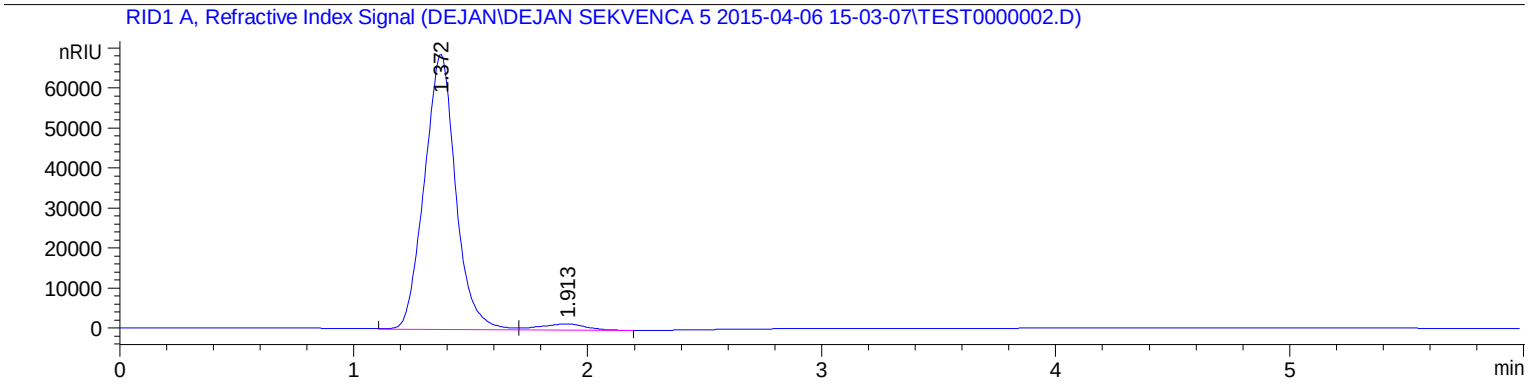


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Compound 20; Method A

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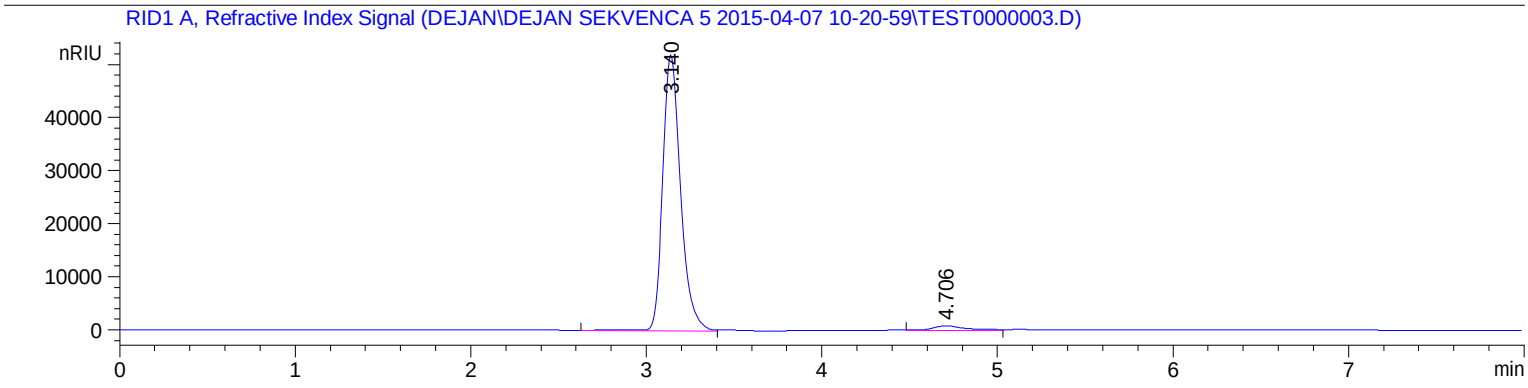


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Compound 20; Method B

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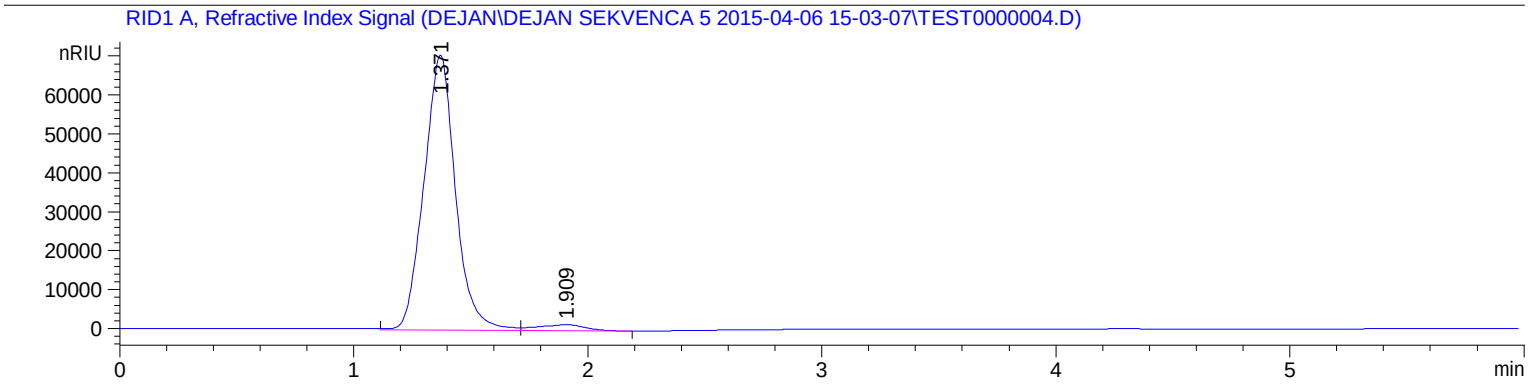


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Sample Name: JR01

Compound 21; Method A

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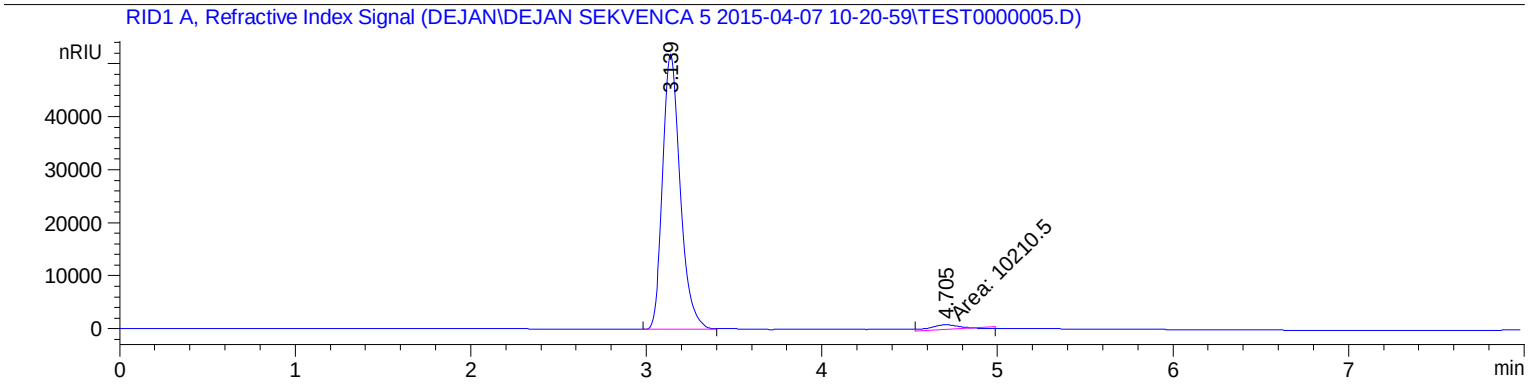


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Sample Name: JR01

Compound 21; Method B

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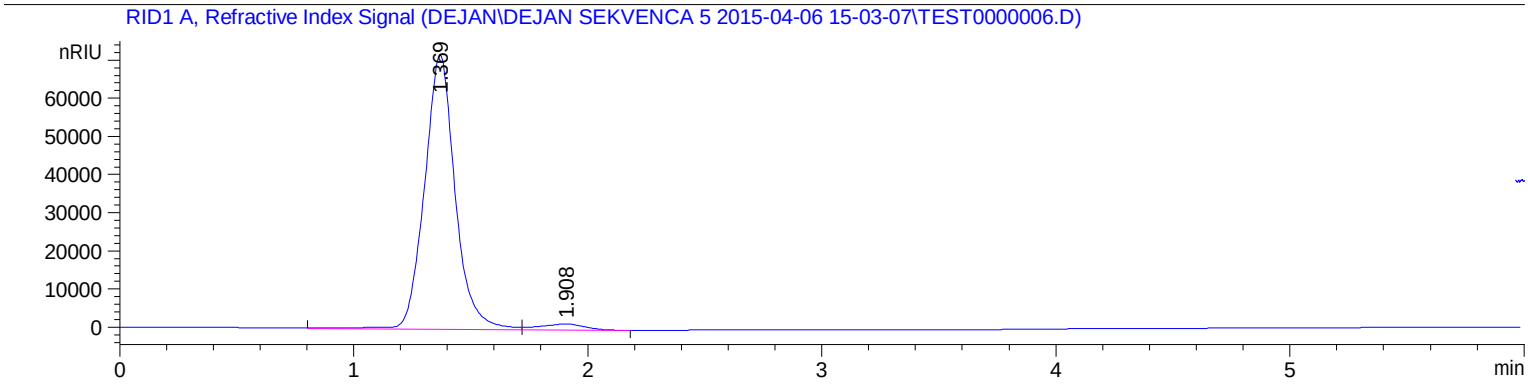


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Additional Info :
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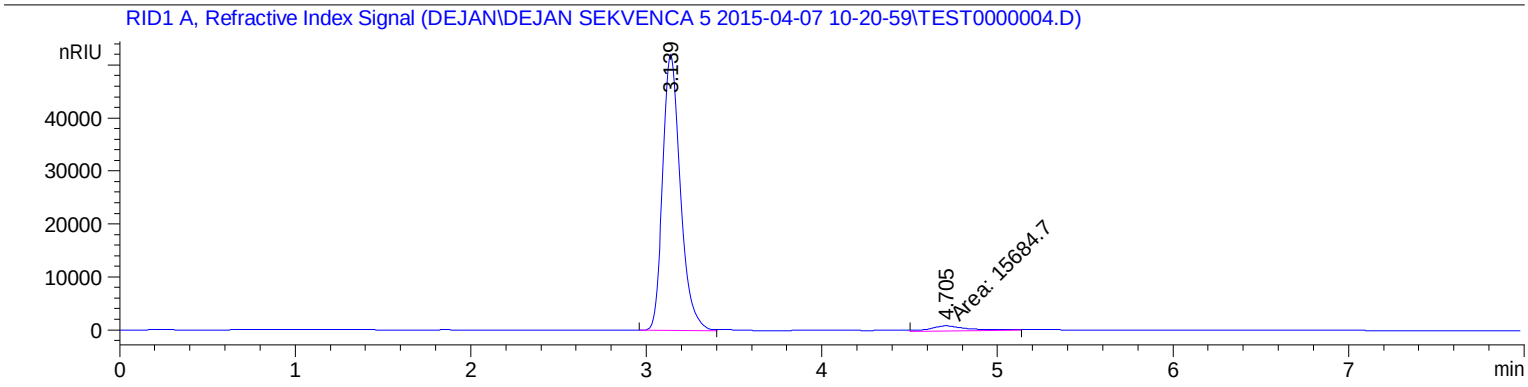
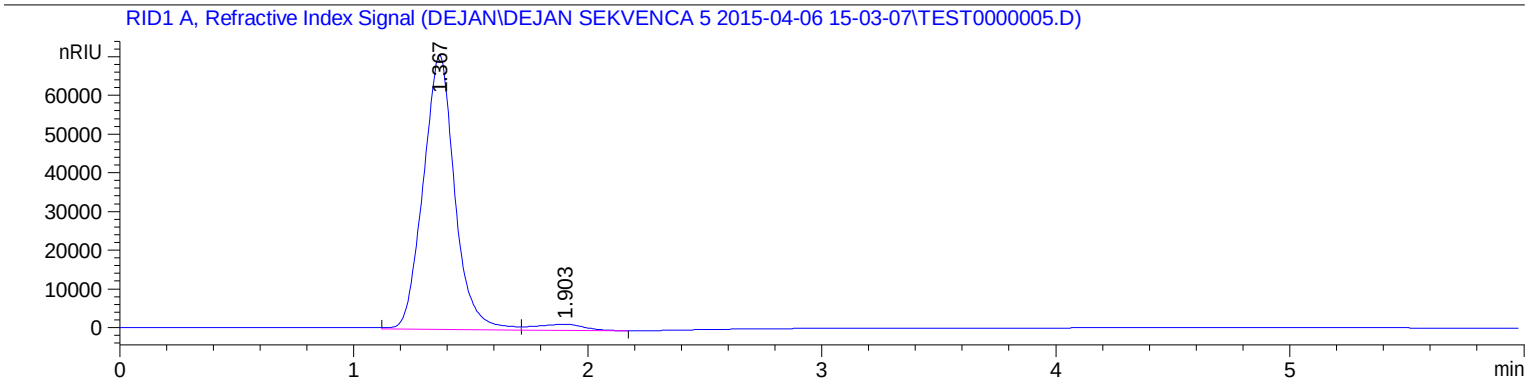



```
==========================================================================
                        Fraction Information
==========================================================================
==========================================================================
No Fractions found.
==========================================================================
```

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

 Sorted By             :      Signal
 Multiplier            :      1.0000
 Dilution              :      1.0000
 Use Multiplier & Dilution Factor with ISTDs


 Signal 1: RID1 A, Refractive Index Signal

 Peak RetTime Type  Width     Area      Height     Area
   #   [min]        [min]  [nRIU*s]    [nRIU]       %
----|-------|----|-------|----------|----------|--------|
   1   3.139 VV    0.1078 3.65355e5  5.20329e4   95.8837
   2   4.705 MM    0.2615 1.56847e4   999.53088   4.1163

 Totals :                  3.81040e5  5.30324e4


 ========================================================================
                         *** End of Report ***
```

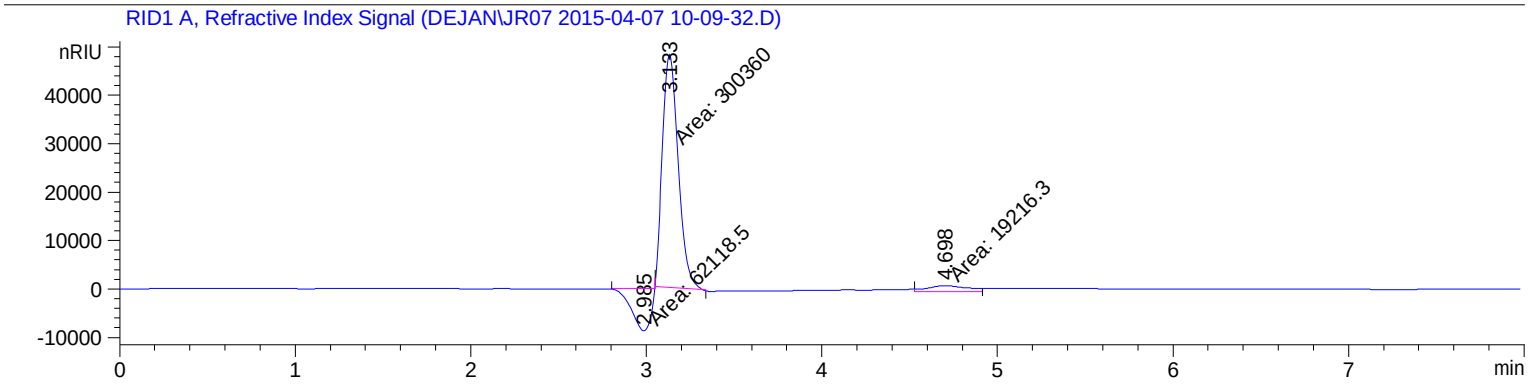
```
==========================================================================
Acq. Operator   : SYSTEM                          Seq. Line :   5
Acq. Instrument : HPLC-Solaja                      Location : Vial 4
Injection Date  : 4/6/2015 3:34:26 PM                   Inj :   1
                                                 Inj Volume : 1.000 µl
Method          : C:\CHEM32\1\DATA\DEJAN\DEJAN SEKVENCA 5 2015-04-06 15-03-07\IZOKRATSKI 1.M
                  (Sequence Method)
Last changed    : 4/6/2015 3:03:07 PM by SYSTEM
Additional Info :
```




```
==========================================================================
                          Fraction Information
==========================================================================
==========================================================================
No Fractions found.
==========================================================================

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

 Sorted By             :      Signal
 Multiplier            :      1.0000
 Dilution              :      1.0000
 Use Multiplier & Dilution Factor with ISTDs


 Signal 1: RID1 A, Refractive Index Signal

 Peak RetTime Type  Width     Area      Height     Area
   #   [min]        [min]  [nRIU*s]    [nRIU]       %
 ----|-------|----|-------|----------|----------|--------|
    1   1.367 VV    0.1369 6.61517e5  7.09264e4   96.7679
    2   1.903 VB    0.1932 2.20950e4  1581.47388   3.2321

 Totals :                  6.83612e5  7.25079e4


 ========================================================================
                          *** End of Report ***
```

Compound 23; Method A

```
==========================================================================
Acq. Operator   : SYSTEM
Acq. Instrument : HPLC-Solaja                    Location : Vial 2
Injection Date  : 4/7/2015 10:10:41 AM
                                                 Inj Volume : 0.600 µl
Acq. Method     : C:\CHEM32\1\METHODS\IZOKRATSKI 1.M
Last changed    : 4/7/2015 10:09:23 AM by SYSTEM
                  (modified after loading)
Analysis Method : C:\CHEM32\1\METHODS\DEF_LC.M
Sample Info     : Poroshell 70%MeOH/30%%H20

Additional Info :
```

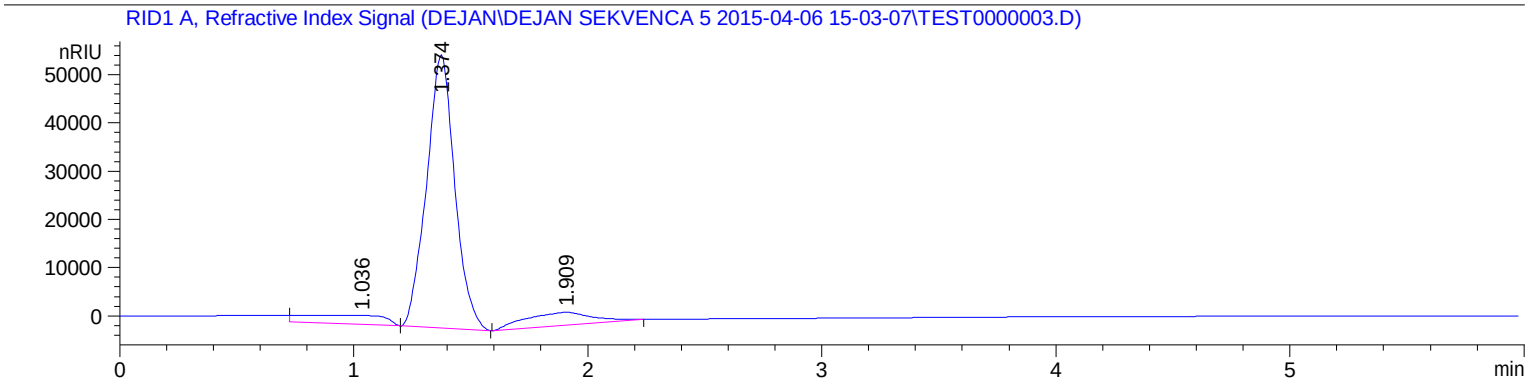



```
==========================================================================================
                            Fraction Information
==========================================================================================
==========================================================================================
No Fractions found.
==========================================================================================

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

 Sorted By             :      Signal
 Multiplier            :      1.0000
 Dilution              :      1.0000
 Use Multiplier & Dilution Factor with ISTDs



 Signal 1: RID1 A, Refractive Index Signal

 Peak RetTime Type  Width     Area      Height     Area
   #   [min]        [min]  [nRIU*s]    [nRIU]       %
----|-------|----|-------|----------|----------|--------|
   1   2.985 MM N  0.1179 6.21185e4  8780.76953  16.2744
   2   3.133 MM    0.1040 3.00360e5  4.81253e4   78.6912
   3   4.698 MM    0.2645 1.92163e4  1210.69263   5.0345

 Totals :                  3.81695e5  5.81167e4


 ========================================================================
                           *** End of Report ***
```

Sample Name: JR07

Compound 23; Method B

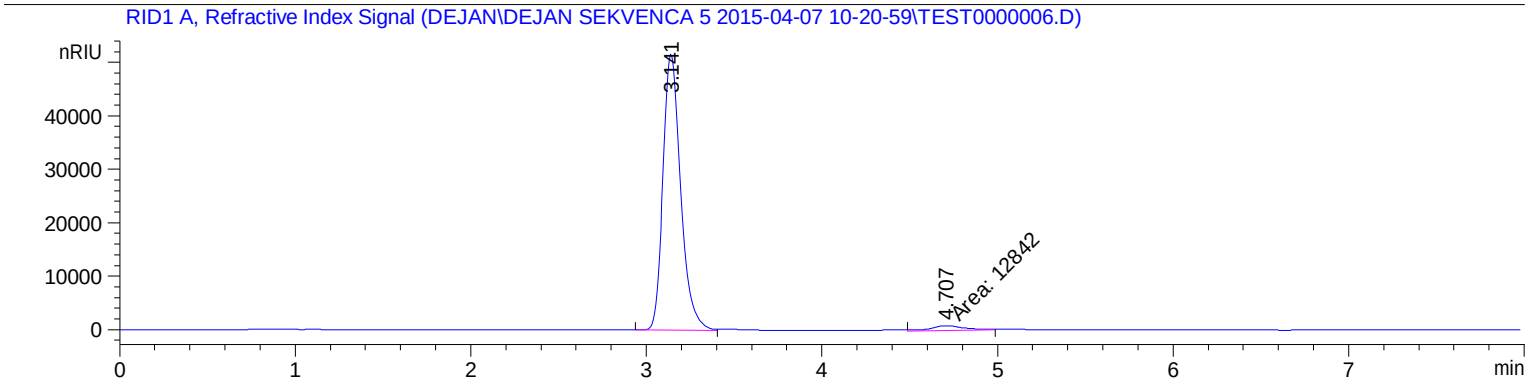
```
==================================================================
Acq. Operator   : SYSTEM                        Seq. Line :   3
Acq. Instrument : HPLC-Solaja                    Location : Vial 2
Injection Date  : 4/6/2015 3:19:24 PM                 Inj :   1
                                               Inj Volume : 1.000 µl
Method          : C:\CHEM32\1\DATA\DEJAN\DEJAN SEKVENCA 5 2015-04-06 15-03-07\IZOKRATSKI 1.M
                  (Sequence Method)
Last changed    : 4/6/2015 3:03:07 PM by SYSTEM
Additional Info :
```




```
==========================================================================
                        Fraction Information
==========================================================================
==========================================================================
No Fractions found.
==========================================================================

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

 Sorted By             :      Signal
 Multiplier            :      1.0000
 Dilution              :      1.0000
 Use Multiplier & Dilution Factor with ISTDs


 Signal 1: RID1 A, Refractive Index Signal

 Peak RetTime Type  Width     Area      Height     Area
   #   [min]        [min]  [nRIU*s]    [nRIU]       %
 ----|-------|----|-------|----------|----------|--------|
    1   1.036 VB    0.3214 4.30415e4  1848.04871   7.5191
    2   1.374 BB    0.1257 4.74381e5  5.66800e4   82.8717
    3   1.909 BB    0.2733 5.50058e4  2663.60571   9.6092

 Totals :                   5.72429e5  6.11917e4


 ========================================================================
                         *** End of Report ***
```

Compound 24; Method A

```
==========================================================================
Acq. Operator   : SYSTEM                          Seq. Line :   6
Acq. Instrument : HPLC-Solaja                      Location : Vial 8
Injection Date  : 4/7/2015 11:09:53 AM                  Inj :   1
                                                 Inj Volume : 0.600 µl
Method          : C:\CHEM32\1\DATA\DEJAN\DEJAN SEKVENCA 5 2015-04-07 10-20-59\IZOKRATSKI 1.M
                  (Sequence Method)
Last changed    : 4/7/2015 10:20:59 AM by SYSTEM
Additional Info :
```

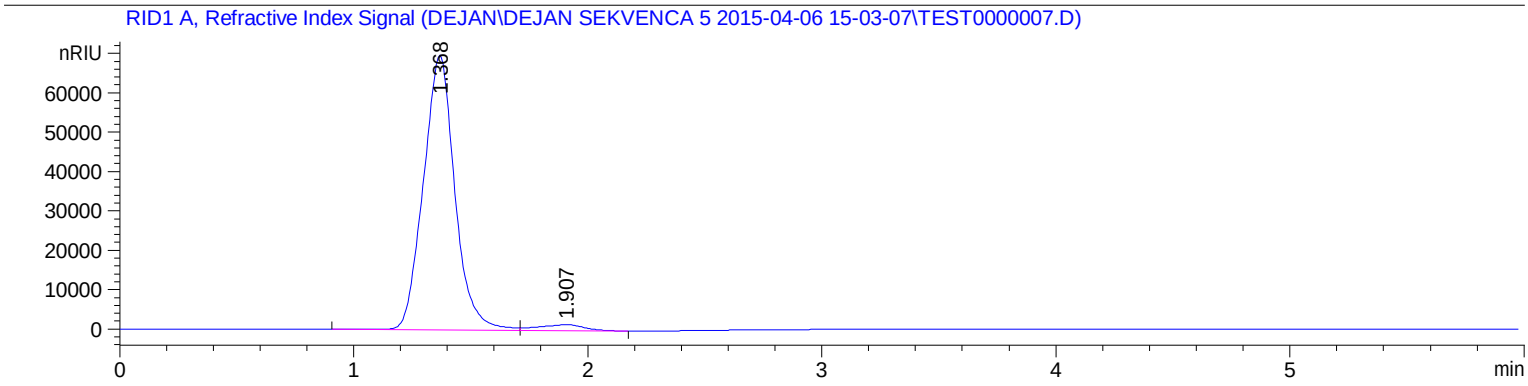



```
==============================================================================
                          Fraction Information
==============================================================================
==============================================================================
No Fractions found.
==============================================================================
```

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

 Sorted By             :      Signal
 Multiplier            :      1.0000
 Dilution              :      1.0000
 Use Multiplier & Dilution Factor with ISTDs


 Signal 1: RID1 A, Refractive Index Signal

 Peak RetTime Type  Width     Area      Height     Area
   #   [min]        [min]  [nRIU*s]    [nRIU]       %
 ----|-------|----|-------|----------|----------|--------|
    1   3.141 VV    0.1076 3.60992e5  5.15494e4   96.5648
    2   4.707 MM    0.2276 1.28420e4   940.18732   3.4352

 Totals :                  3.73834e5  5.24896e4


 ========================================================================
                          *** End of Report ***
```

Compound 24; Method B

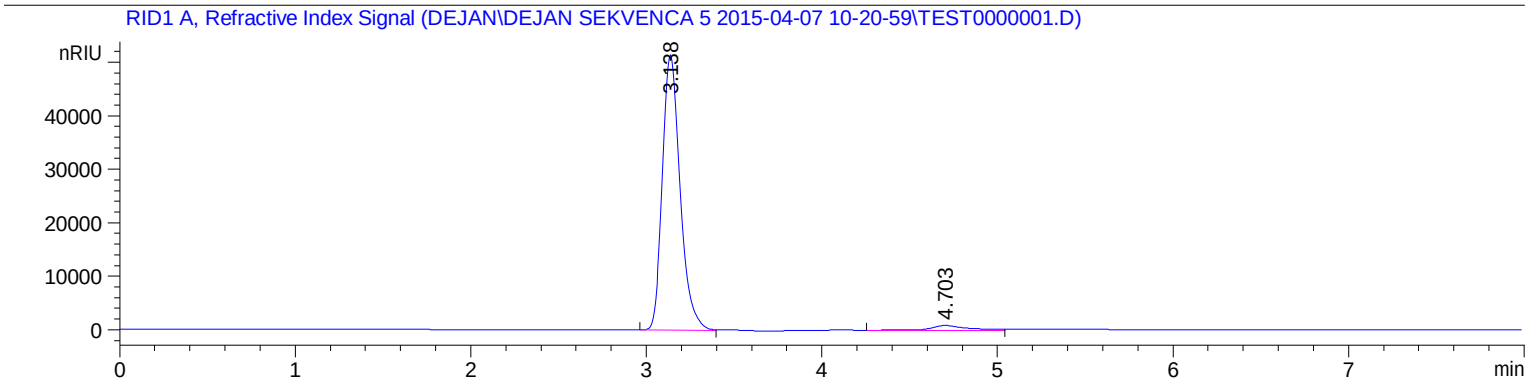
```
=====================================================================
Acq. Operator   : SYSTEM                          Seq. Line :   7
Acq. Instrument : HPLC-Solaja                      Location : Vial 8
Injection Date  : 4/6/2015 3:49:32 PM                   Inj :   1
                                                  Inj Volume : 1.000 µl
Method          : C:\CHEM32\1\DATA\DEJAN\DEJAN SEKVENCA 5 2015-04-06 15-03-07\IZOKRATSKI 1.M
                  (Sequence Method)
Last changed    : 4/6/2015 3:03:07 PM by SYSTEM
Additional Info :
```




```
=============================================================================
                          Fraction Information
=============================================================================
=============================================================================
No Fractions found.
=============================================================================

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

 Sorted By             :      Signal
 Multiplier            :      1.0000
 Dilution              :      1.0000
 Use Multiplier & Dilution Factor with ISTDs


 Signal 1: RID1 A, Refractive Index Signal

 Peak RetTime Type  Width     Area      Height     Area
   #   [min]       [min]  [nRIU*s]    [nRIU]       %
----|-------|----|-------|----------|----------|--------|
   1   1.368 BV    0.1368 6.50110e5  6.97456e4   96.9697
   2   1.907 VB    0.1872 2.03159e4  1509.72192   3.0303

 Totals :                 6.70426e5  7.12553e4


 ====================================================================
                          *** End of Report ***
```

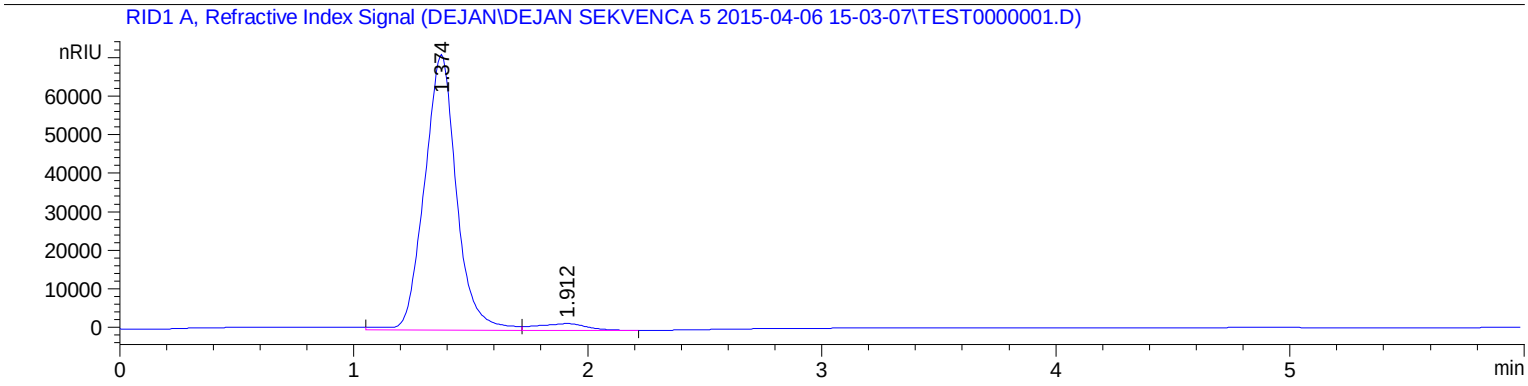
Compound 25; Method A

```
==========================================================================
Acq. Operator   : SYSTEM                          Seq. Line :   1
Acq. Instrument : HPLC-Solaja                      Location : Vial 6
Injection Date  : 4/7/2015 10:22:13 AM                  Inj :   1
                                                 Inj Volume : 0.600 µl
Method          : C:\CHEM32\1\DATA\DEJAN\DEJAN SEKVENCA 5 2015-04-07 10-20-59\IZOKRATSKI 1.M
                  (Sequence Method)
Last changed    : 4/7/2015 10:20:59 AM by SYSTEM
Additional Info :
```




```
==========================================================================================
                            Fraction Information
==========================================================================================
==========================================================================================
No Fractions found.
==========================================================================================

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

 Sorted By             :      Signal
 Multiplier            :      1.0000
 Dilution              :      1.0000
 Use Multiplier & Dilution Factor with ISTDs


 Signal 1: RID1 A, Refractive Index Signal

 Peak RetTime Type  Width     Area      Height     Area
   #   [min]        [min]  [nRIU*s]    [nRIU]       %
----|-------|----|-------|----------|----------|--------|
    1   3.138 BV    0.1077 3.60537e5  5.14312e4   96.3422
    2   4.703 BV    0.2172 1.36885e4   895.57855   3.6578

 Totals :                  3.74225e5  5.23268e4


 ========================================================================
                          *** End of Report ***
```

```
==========================================================================
Acq. Operator   : SYSTEM                          Seq. Line :   1
Acq. Instrument : HPLC-Solaja                      Location : Vial 6
Injection Date  : 4/6/2015 3:04:22 PM                   Inj :   1
                                                 Inj Volume : 1.000 µl
Method          : C:\CHEM32\1\DATA\DEJAN\DEJAN SEKVENCA 5 2015-04-06 15-03-07\IZOKRATSKI 1.M
                  (Sequence Method)
Last changed    : 4/6/2015 3:03:07 PM by SYSTEM
Additional Info :
```




```
==============================================================================
                          Fraction Information
==============================================================================
==============================================================================
No Fractions found.
==============================================================================

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

 Sorted By             :      Signal
 Multiplier            :      1.0000
 Dilution              :      1.0000
 Use Multiplier & Dilution Factor with ISTDs


 Signal 1: RID1 A, Refractive Index Signal

 Peak RetTime Type  Width     Area      Height     Area
   #   [min]        [min]  [nRIU*s]    [nRIU]       %
 ----|-------|----|-------|----------|----------|--------|
    1   1.374 VV    0.1390 6.78876e5  7.14253e4   96.4019
    2   1.912 VB    0.2010 2.53385e4  1731.30737   3.5981

 Totals :                  7.04215e5  7.31566e4


 ========================================================================
                          *** End of Report ***
```