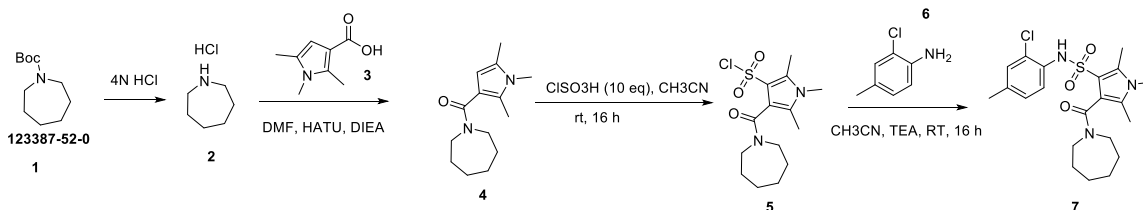
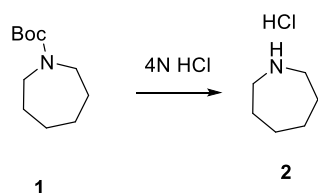


Synthesis of G243-1720

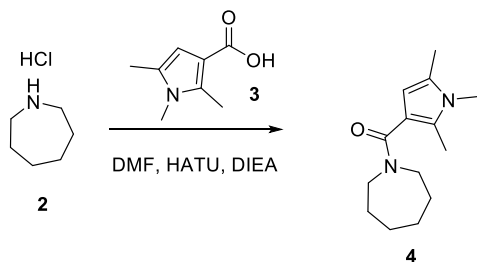


Step 1: Synthesis of Compound 2



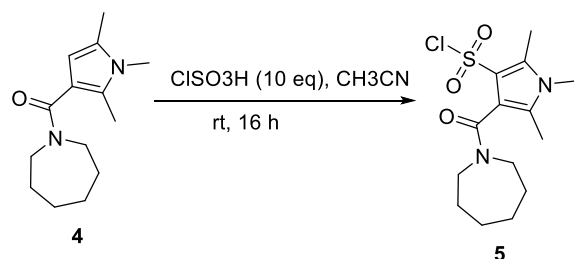
A mixture of Compound **1** (1 g, 5.03 mmol), TFA (5 ml) in DCM (25 ml) was stirred for 2 h. LCMS showed reaction was completed. Concentrated to give 300 mg desired product as HCl salt. It was used directly for next step. MS(ESI): m/z 100 ($M+H$)⁺

Step 2: Synthesis of Compound 4



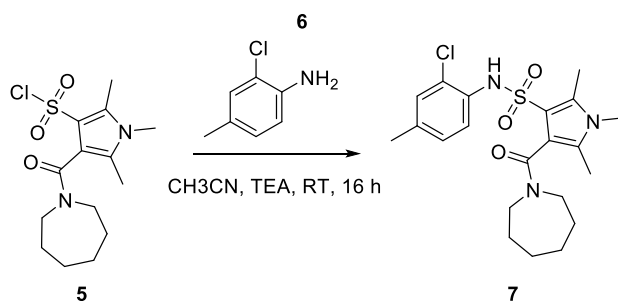
Compound **3** (210 mg, 1.52 mmol) was added to a solution of Compound **2** (150 mg, 1.52 mmol), DIEA (399 mg, 1.85 mmol), HATU (690 mg, 1.85 mmol) in DCE (30 ml) at rt. The mixture was stirred for 6 h. LCMS showed reaction is good. Concentrated and residue was Purified by combineflash (reverse silica, HC3CN: 0.05% TFA solution, UV 214) to give 180 mg (85%). desired product as white solid. ESI ($M+H$)⁺ = 235

Step 3: Synthesis of Compound 5



A mixture of Compound **4** (1.5 g, 6.41 mmol), $\text{Cl}(\text{SO}_3\text{H})$ (7.5 g, 64.1 mmol), in CH_3CN (50 ml) was stirred for 5 h. Filtered and concentrated, the residue was used directly for next step without purification. ESI $(\text{M}+1)^+ = 333.1$

Step 4: Synthesis of Compound 7

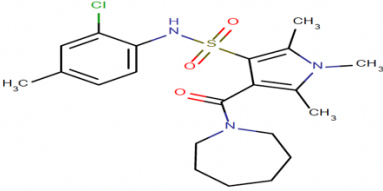


A mixture of Compound **5** (2.12 g, 6.41 mmol), Compound **6** (2.71 g, 19.63 mmol) TEA (13 g, 128 mmol) in CH_3CN (150 ml) was stirred for 6 h. Concentrated and residue was purified by combine flash ($\text{DCM}:\text{CH}_3\text{OH}=20:1$, normal phase silica, UV 254) to give 1.2 g (42%) desire dproduct as white solid. ESI $(\text{M}+1)^+ = 438.1$

^1H NMR (400 MHz, CDCl_3) δ 7.74 (s, 1H), 7.45 (d, $J=8$ Hz, 1H), 7.27 (s, 1H), 7.11 (d, $J=4$ Hz, 1H), 6.97 (d, $J=8$ Hz, 1H), 4.00-3.54 (m, 1H), 3.52-3.36 (m, 1H), 3.34-3.28 (m, 5H), 2.26 (s, 3H), 2.18 (s, 3H), 2.12 (s, 3H), 2.02-1.97 (m, 4 H), 1.77-1.50 (m, 7 H).

Analytical Report for G243-1720

Product information

Mol. Structure	
Mol. Formula	C ₂₁ H ₂₈ ClN ₃ O ₃ S
Structure Name	4-(azepane-1-carbonyl)-N-(2-chloro-4-methylphenyl)-1,2,5-trimethyl-1H-pyrrole-3-sulfonamide
Mol. Wt.	437.98
Salt Type	N/A
Net Wt.	1.1 g

Analytical Tests and Results

Analytical Tests	Results
Description	White solid
¹ H-NMR (400 MHz, CDCl ₃ -d ₁)	Consistent with the structure
ESI-LCMS	<i>m/z</i> = 438.1 [M+H] ⁺
LCMS	RT=2.05 min, >95%

File D:\DATA\T453\MONITOR\ZZX-437-P-02088-LCMSA018.D

Injection Date : 26 Jul 25 3:04 pm +0800

Tgt Mass(EZX) : 437.00

Sample Name : ZZX-437-P

Location : P1-B-04

Acq. Operator : T453-MONITOR

Inj : 1

Spec. Reported : MS Integration

Inj Volume : 5 ul

Acq. Method : D:\METHODS\2-POS-3MIN.M

Analysis Method : D:\METHODS\2-POS-3MIN.M

Sample Info : Easy-Access Method: '2-POS-3MIN.M' 437.00

Method Info : Column:XBridge C18 (4.6x 50 mm, 3.5um)

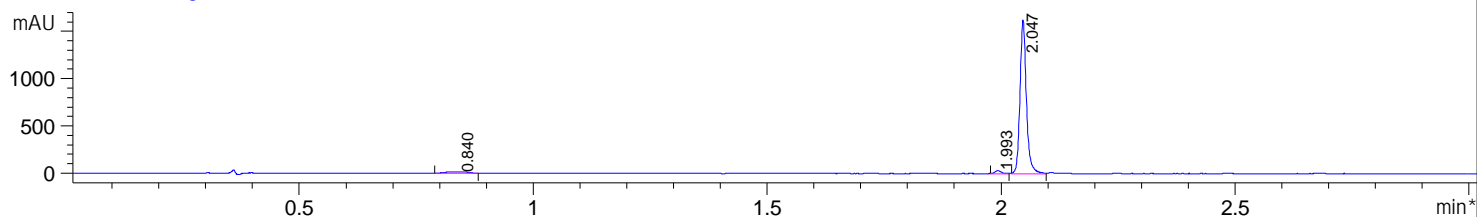
Mobile phase: H2O(10 mmol NH4HCO3) (A) / ACN(B)

Elution program: Gradient from 10 to 90% of B in1.3min at 1.8ml/min

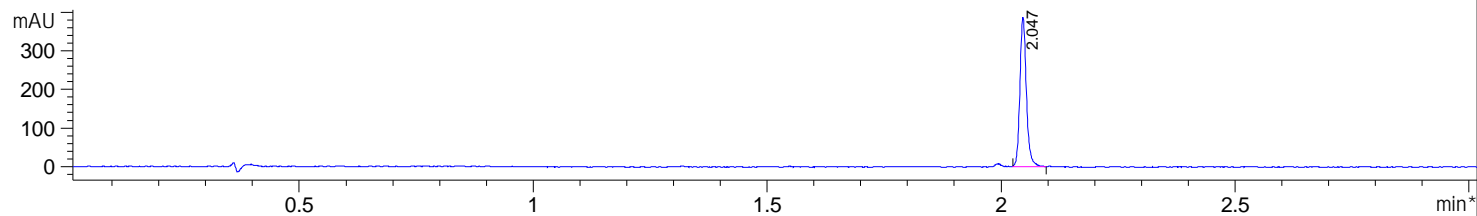
Temperature:50°C

Detection: UV (214 , 4 nm) and MS (ESI, POS mode ,110 to 1500 amu)

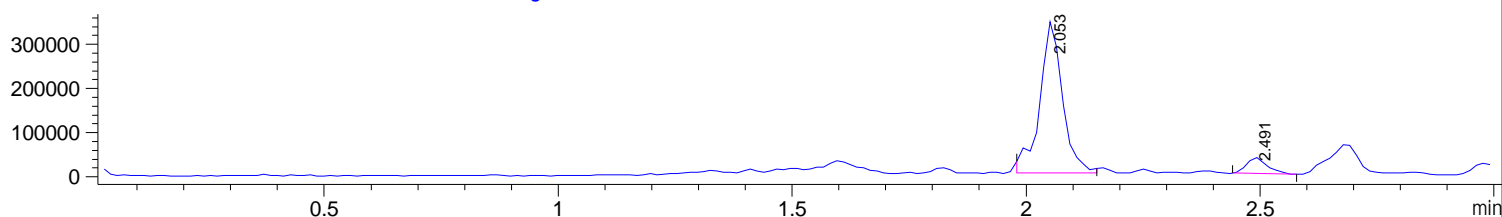
*DAD1 A, Sig=214,4 Ref=off



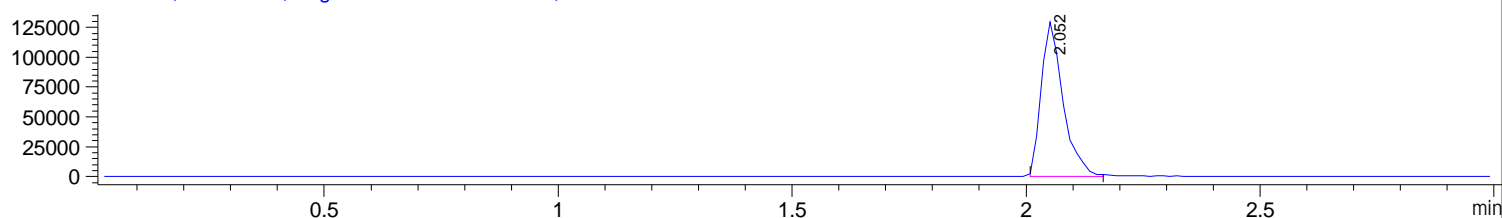
*DAD1 B, Sig=254,4 Ref=off



MSD1 TIC, MS File ES-API, Pos, Scan, Frag: 70



Ion 438, MSD1 438, Target Mass 437 +H Positive, EIC=437.7:438.7



Integration Results for DAD1 A, Sig=214,4 Ref=off

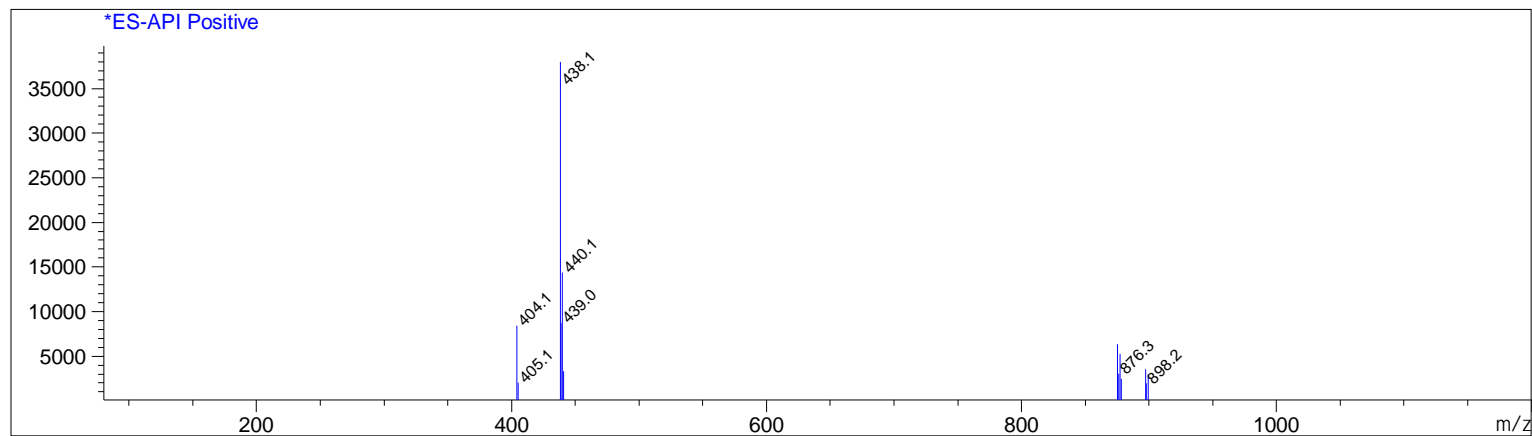
RetTim	Width	Area	Height	Area%
0.84	0.04	46.44	16.02	2.88
1.99	0.01	29.39	32.18	1.83
2.05	0.01	1534.13	1627.87	95.29

Integration Results for DAD1 B, Sig=254,4 Ref=off

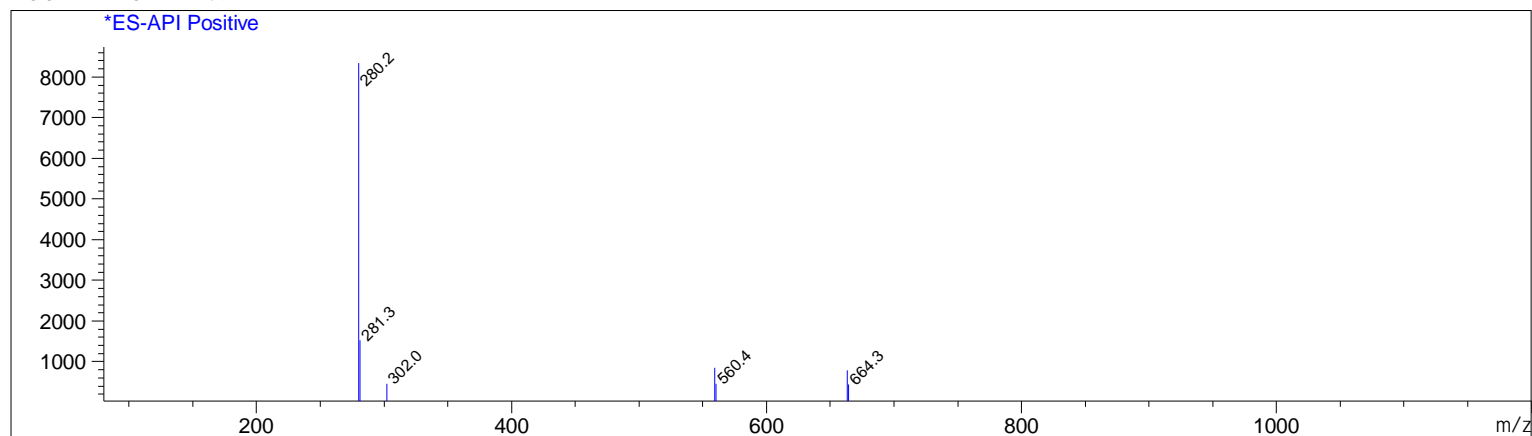
RetTim	Width	Area	Height	Area%
2.05	0.01	375.44	388.97	100.00

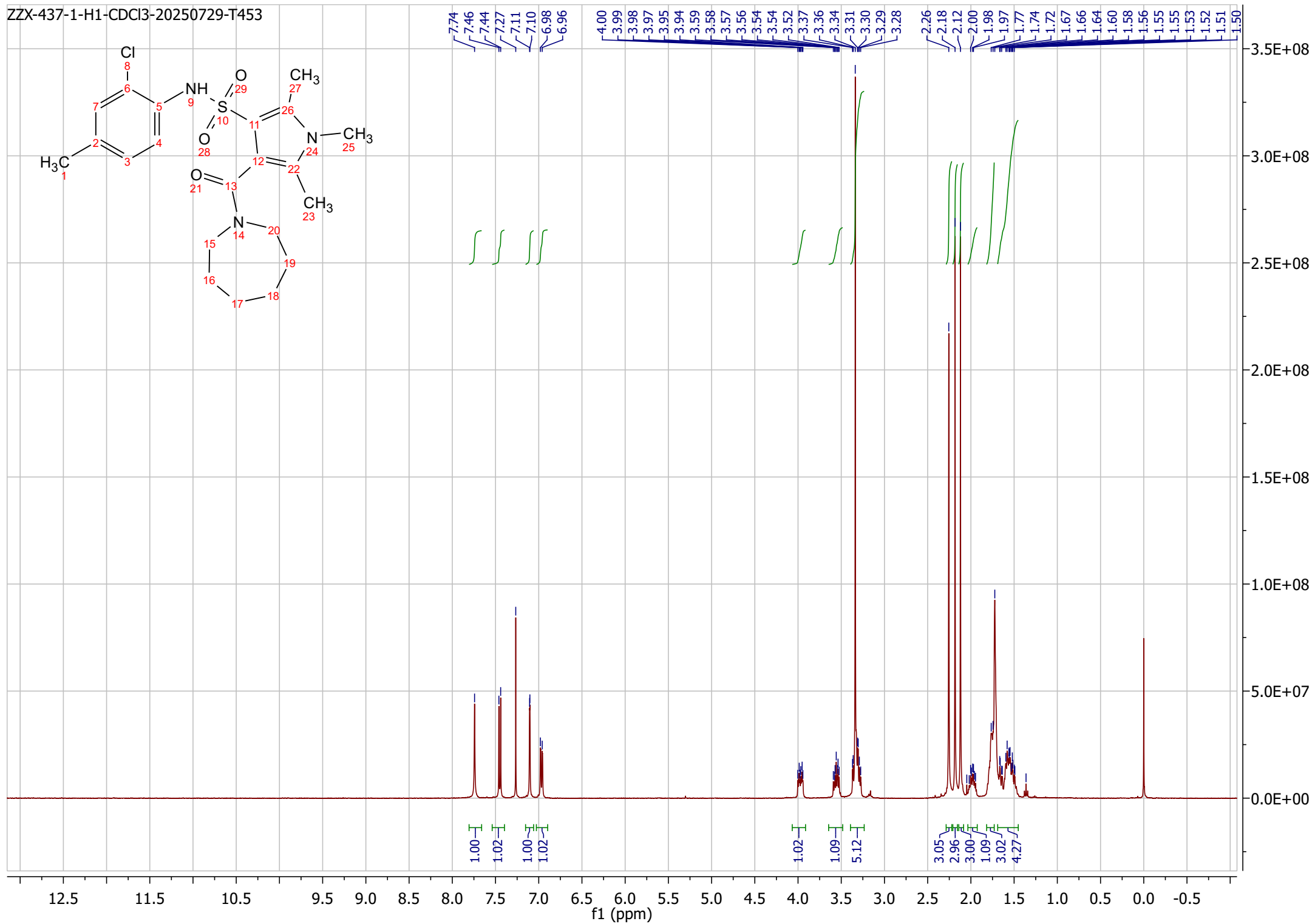
Ret. Time: 2.05

<<<< POSITIVE SPECTRA >>>>



Ret. Time: 2.49





Sample Name: ZZX-437-P

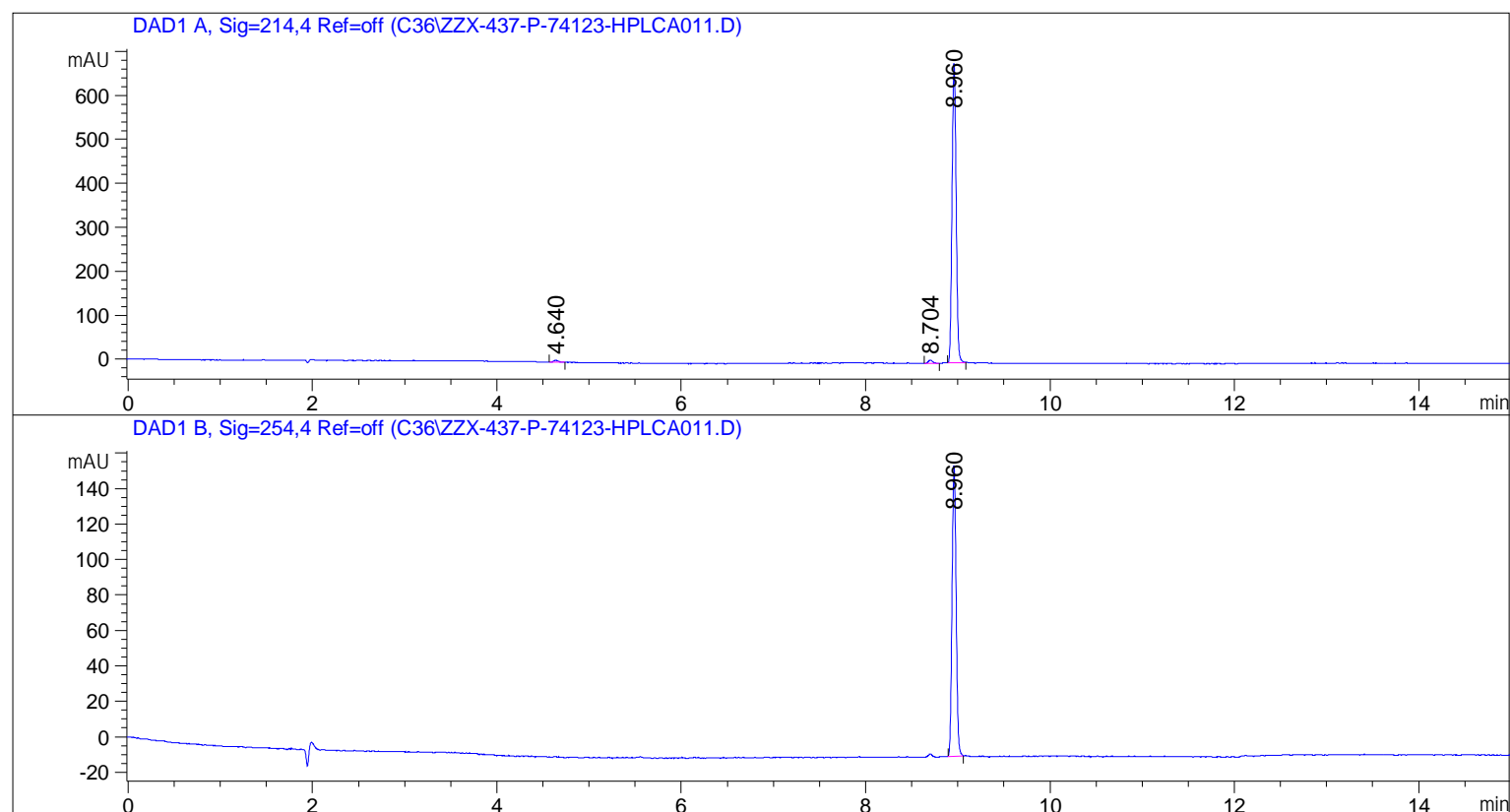
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Acq. Operator : C36-MONITOR
Acq. Instrument : HPLCA011 Location : P1-A-01
Injection Date : 7/29/2025 3:09:00 PM Inj Volume : 1.0 µl

Method : D:\METHODS\2-HPLC-15MIN.M
Last changed : 7/29/2025 3:08:01 PM by C36-MONITOR
(modified after loading)

Method Info : Mobile Phase: A:Water(10mM NH₄HC03) B:ACN
Gradient: 10%B for 1 min, 10%B increase to 95%B within 7min, 95%B for 7min
Flow Rate: 1.0 ml/min
Column: Xbridge C18, 3.5µm, 4.6*150mm
Column Temperature: 40C

Sample Info : Easy-Access Method: '2-HPLC-15MIN.M'



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Area Percent Report

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

Signal 1: DAD1 A, Sig=214,4 Ref=off

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	4.640	BB	0.0560	15.24744	4.13543	0.6873
2	8.704	BB	0.0512	22.06135	6.92533	0.9944

Sample Name: ZZX-437-P

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
3	8.960	BB	0.0514	2181.19629	680.70929	98.3183

Totals : 2218.50508 691.77006

Signal 2: DAD1 B, Sig=254,4 Ref=off

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	8.960	BB	0.0512	522.31049	164.02367	100.0000

Totals : 522.31049 164.02367

*** End of Report ***