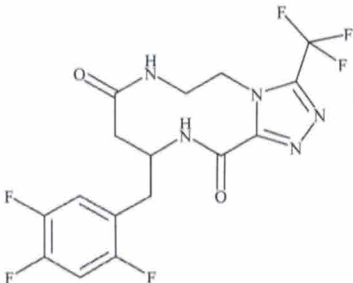


**Certificate of Analysis**

Certificate No.: 20170705008

Date: July 5, 2017

Retest date: June 26, 2020

Compound Name: Sitagliptin Triazecine Analog		
TLC Catalogue Number:	S-2045	
CAS Number:	N/A	
Molecular Weight:	421.30	
Molecular Formula:	C ₁₆ H ₁₃ F ₆ N ₅ O ₂	
Source:	TLC Pharmaceutical Standards	
Source Lot No.:	2659-025A2	
Storage Conditions:	Store at 2-8 °C.	

Test Description	Specifications	Results
Visual Description	White to off-white solid	Conforms
Identification		
MS	Conforms to structure	Conforms
¹ H NMR	Conforms to structure	Conforms
Purity (HPLC)	Not less than 95.0%	98.3%
Residual Solvents (NMR)	0.1% methanol	
Recommendation:	Released.	

Name	Department	Signature	Date
Reviewed and approved by:	Analytical Services		07/06/2017
Approved by:	Quality Assurance		07/06/2017

Attachments: HPLC, MS and NMR spectra.

Sample Name: 2659-025A2

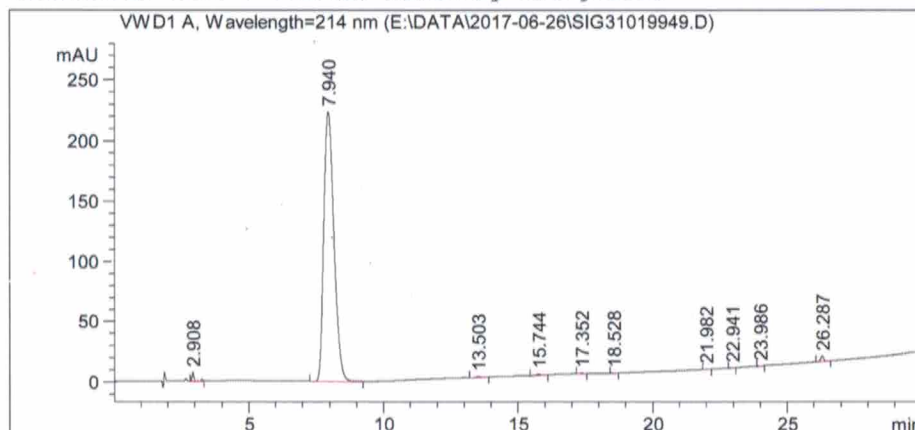
```

=====
Acq. Operator   : ZM
Acq. Instrument : Agilent LC-1260_1          Location : Vial 21
Injection Date  : 6/26/2017 11:47:21 AM
                                           Inj Volume : 5.000 µl

Acq. Method     : C:\CHEM32\1\METHODS\4.M
Last changed    : 6/26/2017 11:43:00 AM by ZM
                  (modified after loading)
Analysis Method : C:\CHEM32\1\METHODS\4.M
Last changed    : 6/26/2017 5:01:39 PM by ZM
                  (modified after loading)
Sample Info     : ZORBAX SB-Aq (4.6*250mm, 5µm); F=1.0mL/min; T=30 degree
                  CH3OH/H2O=50/50 (0-6min), 50/50-90/10 (6-26min), 90/10 (after 26min)
=====

```

Additional Info : Peak(s) manually integrated



```

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

```

```

Sorted By      : Signal
Multiplier     : 1.0000
Dilution       : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

```

Signal 1: VWD1 A, Wavelength=214 nm

**REVIEWED AND
APPROVED**

for 02/06/2017

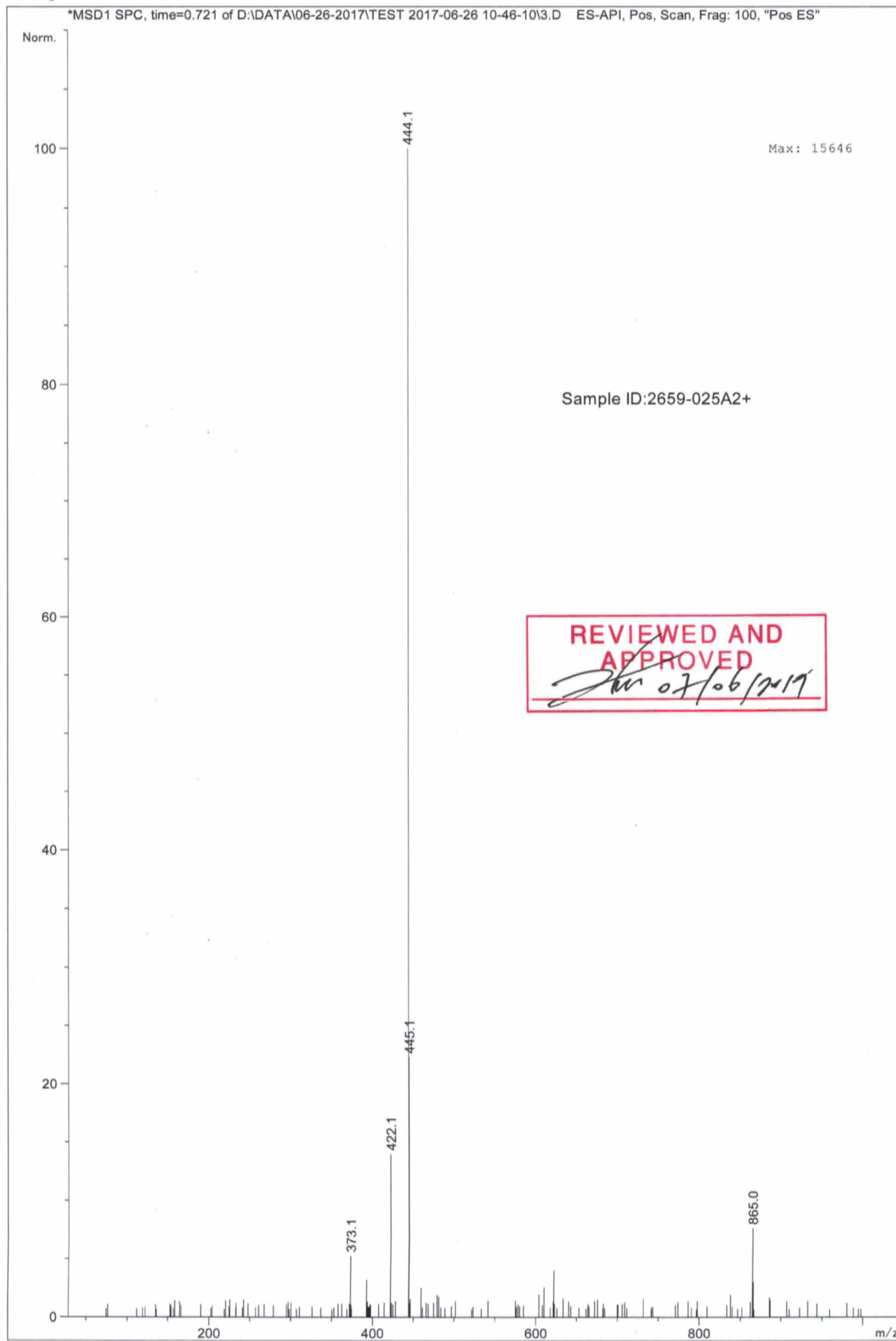
Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	2.908	MM R	0.0886	38.93598	7.32423	0.6591
2	7.940	MM R	0.4341	5807.22021	222.97314	98.3092
3	13.503	MM R	0.2347	9.33936	6.63178e-1	0.1581
4	15.744	MM R	0.1856	8.38039	7.52591e-1	0.1419
5	17.352	MM R	0.1453	3.60058	4.13027e-1	0.0610
6	18.528	MM R	0.1450	1.33570	1.53509e-1	0.0226
7	21.982	MM R	0.1372	2.15278	2.61459e-1	0.0364
8	22.941	MM R	0.1440	1.49145	1.72598e-1	0.0252
9	23.986	MM R	0.1299	1.60281	2.05590e-1	0.0271
10	26.287	MM R	0.1657	33.03975	4.46471	0.5593

Totals : 5907.09902 237.38404

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



MS Spectrum



2659-025A2 1H NMR in DMSO-d6

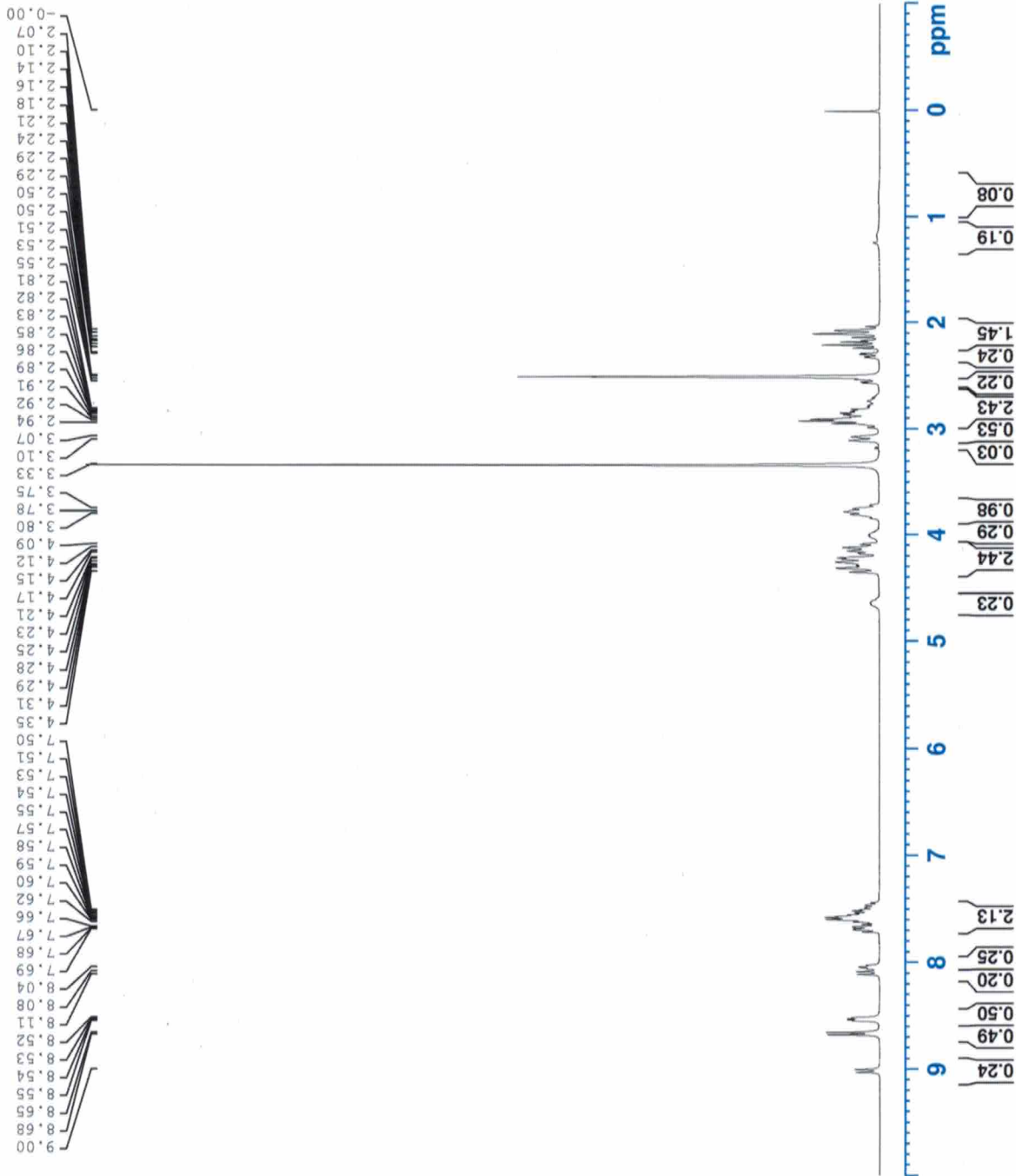


Current Data Parameters
NAME 2659-025A2
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170627
Time 17.16 h

INSTRUM spect
PROBHD zg30
PULPROG zg30
TD 65536
SOLVENT DMSO-d6
NS 4
DS 0
SWH 8802.817 Hz
FIDRES 0.268641 Hz
AQ 3.7224448 sec
RG 130.03
DW 56.800 usec
DE 6.50 usec
TE 298.0 K
D1 1.00000000 sec
TD0 1
SF01 400.132010 MHz
NUC1 1H
F1 9.70 usec
PLW1 16.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1300014 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



REVIEWED AND
APPROVED

2659-025A2 1H NMR in DMSO-d6