

EXAMPLE CHROMATOGRAMS

P1 MRTPA ZRH_2016_76_LC-HRAM-MS

Program Name	P1
Project Name	THS 2.2 Commercial Product Characterization
Covered Time Period	March – June 2016
Category of Experimental Work	Non-Targeted Differential Screening (NTDS) using LC-HRAM-MS
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INTRODUCTION

This document describes the experimental example chromatograms for the comparison of the chemical aerosol composition of THS 2.2 regular (Dorado II 'Ron') and THS 2.2 menthol (Dorado I 'Mint Vinny Low') HeatSticks using commercial THD 2.4 devices versus the conventional reference cigarette 3R4F acquired and reported during the study P1 MRTPA ZRH_2016_76_LC-HRAM-MS.

Aerosols for all test items were generated using the Health Canada intense smoking regimen and were analyzed by NTDS using LC-HRAM-MS with 4 independent analytical methods (RP HESI positive, RP HESI negative, RP APCI positive and HILIC HESI positive) as described in PMI_RD_WKI_001225¹.

The example chromatograms are showing a representative subset of the study raw data. A representative chromatogram of each injected sample type (3R4F, THSR, THSM, Blank and SST) is shown for each applied method. The base peak chromatograms are normalized to a fixed scale of abundance per applied method for an enhanced visual comparability.

Blank samples representing aerosol generation blanks including a set of internal standards.

¹ PMI_RD_WKI_001225 'NTDS LC-HR-MS PROGENESIS QI'

RT: 0.00 - 20.01

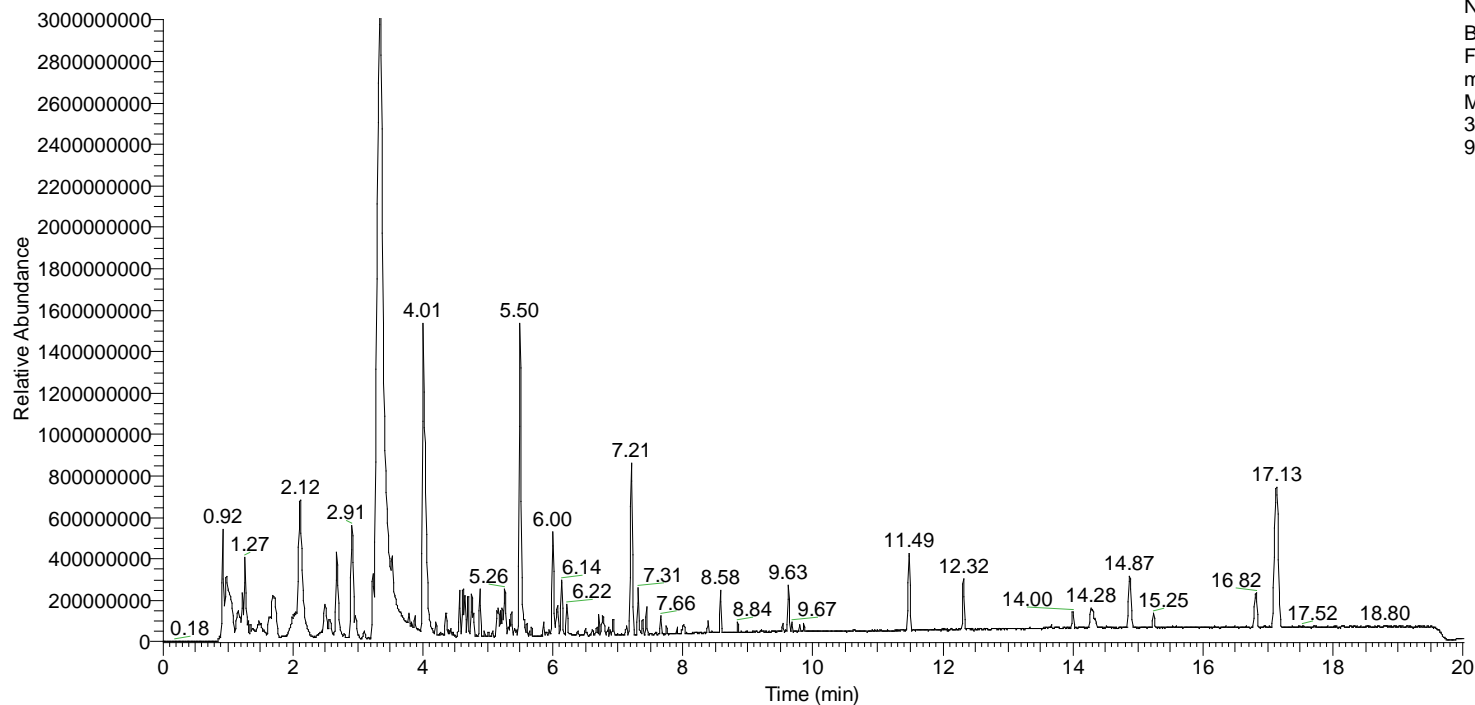
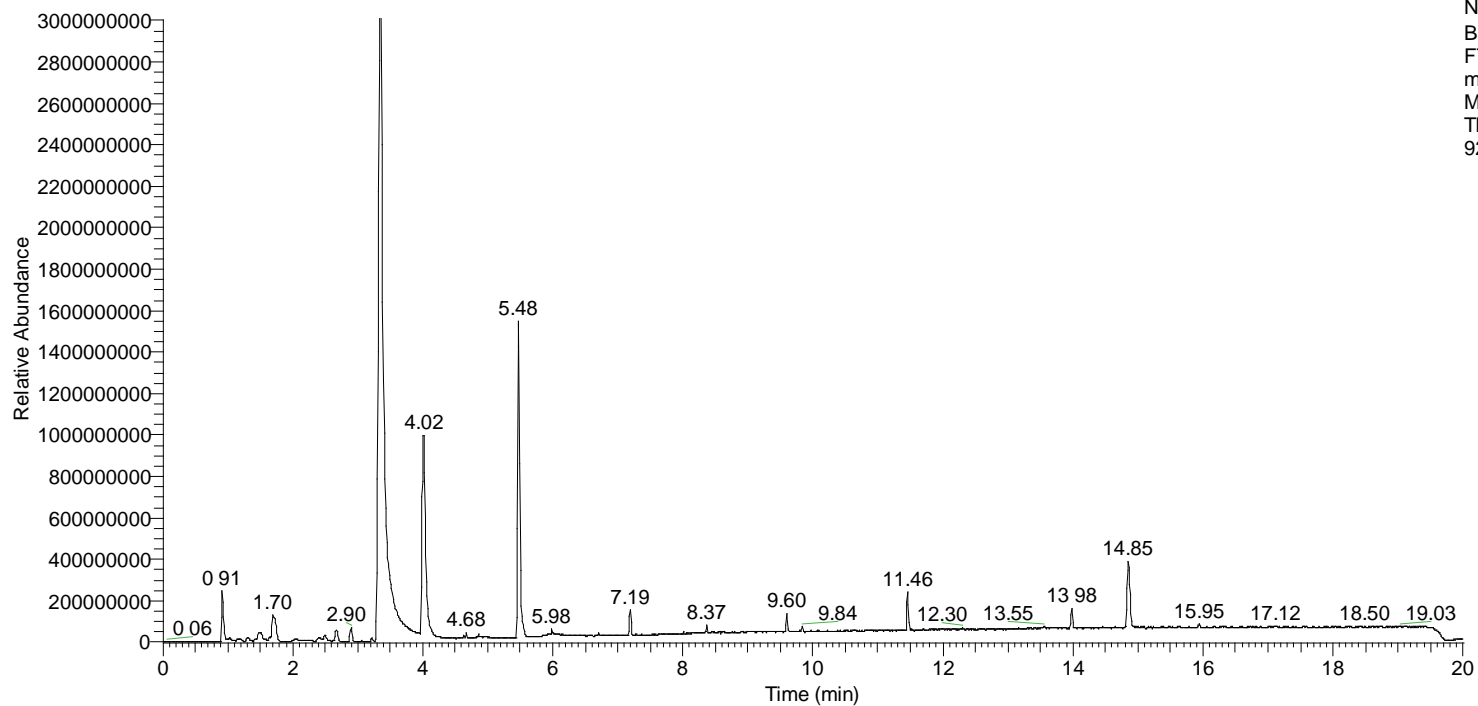


Figure 1 **RP-HESI-Pos_3R4F_1501930_01_1A**

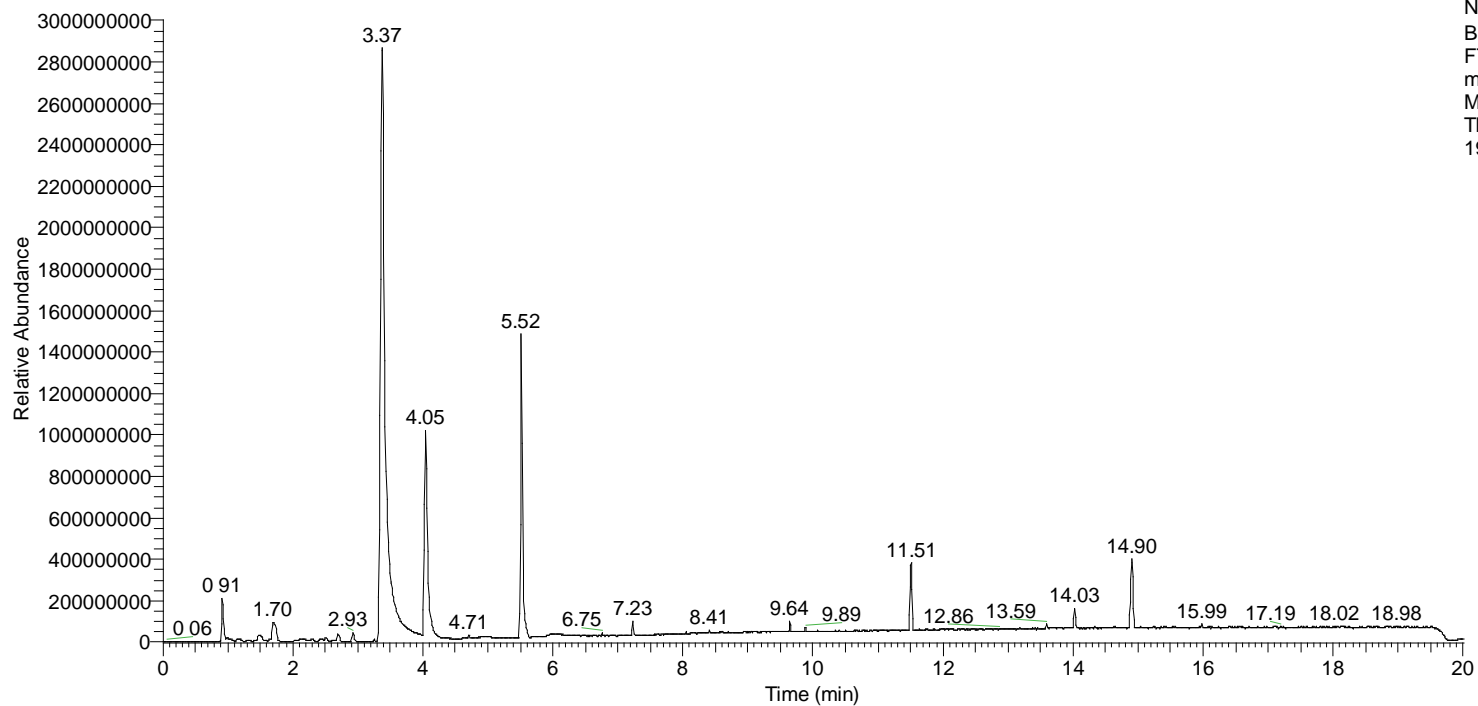
RT: 0.00 - 20.01



NL: 3.00E9
Base Peak F:
FTMS + p ESI Full
ms [80.00-800.00]
MS
THSR_RPEP_1501
926_01_1A

Figure 2 **RP-HESI-Pos_THSR_1501926_01_1A**

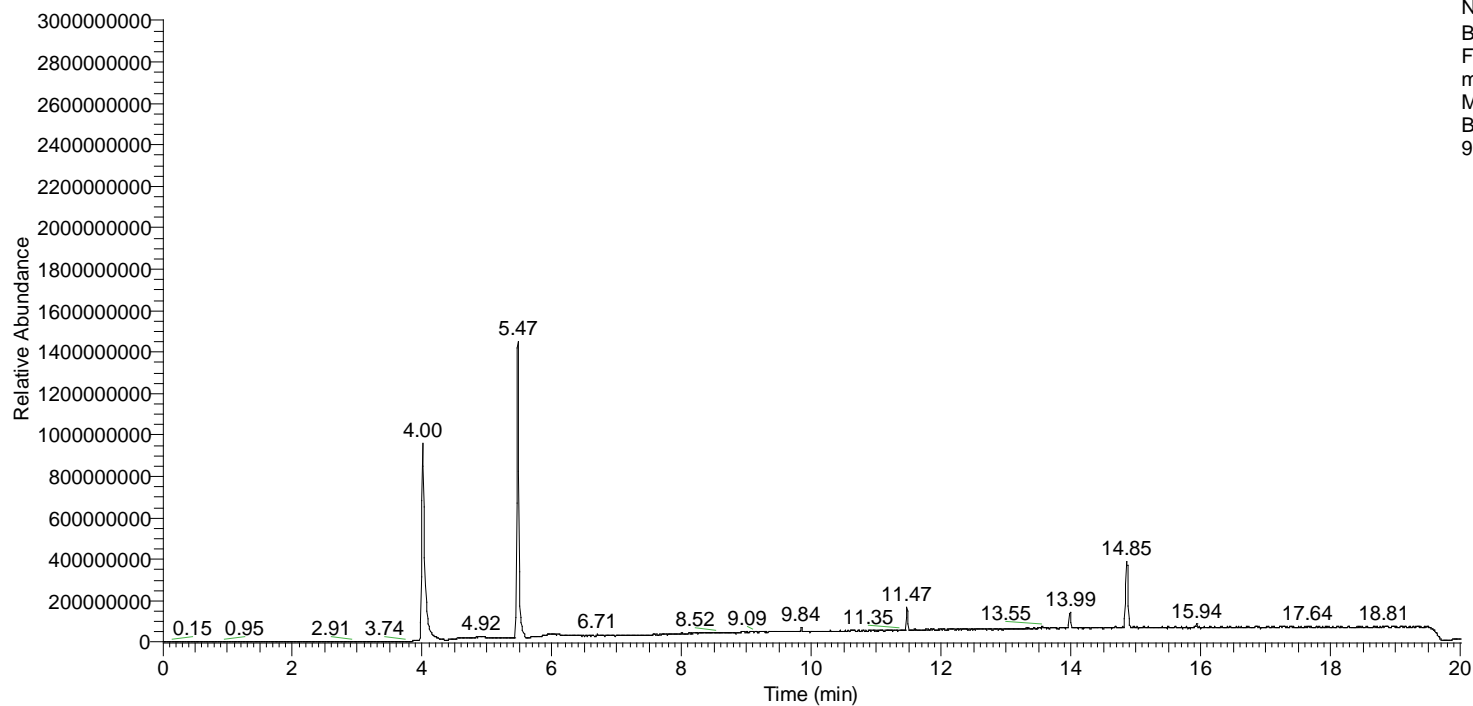
RT: 0.00 - 20.00



NL: 3.00E9
Base Peak F:
FTMS + p ESI Full
ms [80.00-800.00]
MS
THSM_RPEP_150
1928_01_1A

Figure 3 **RP-HESI-Pos_THSM_1501928_01_1A**

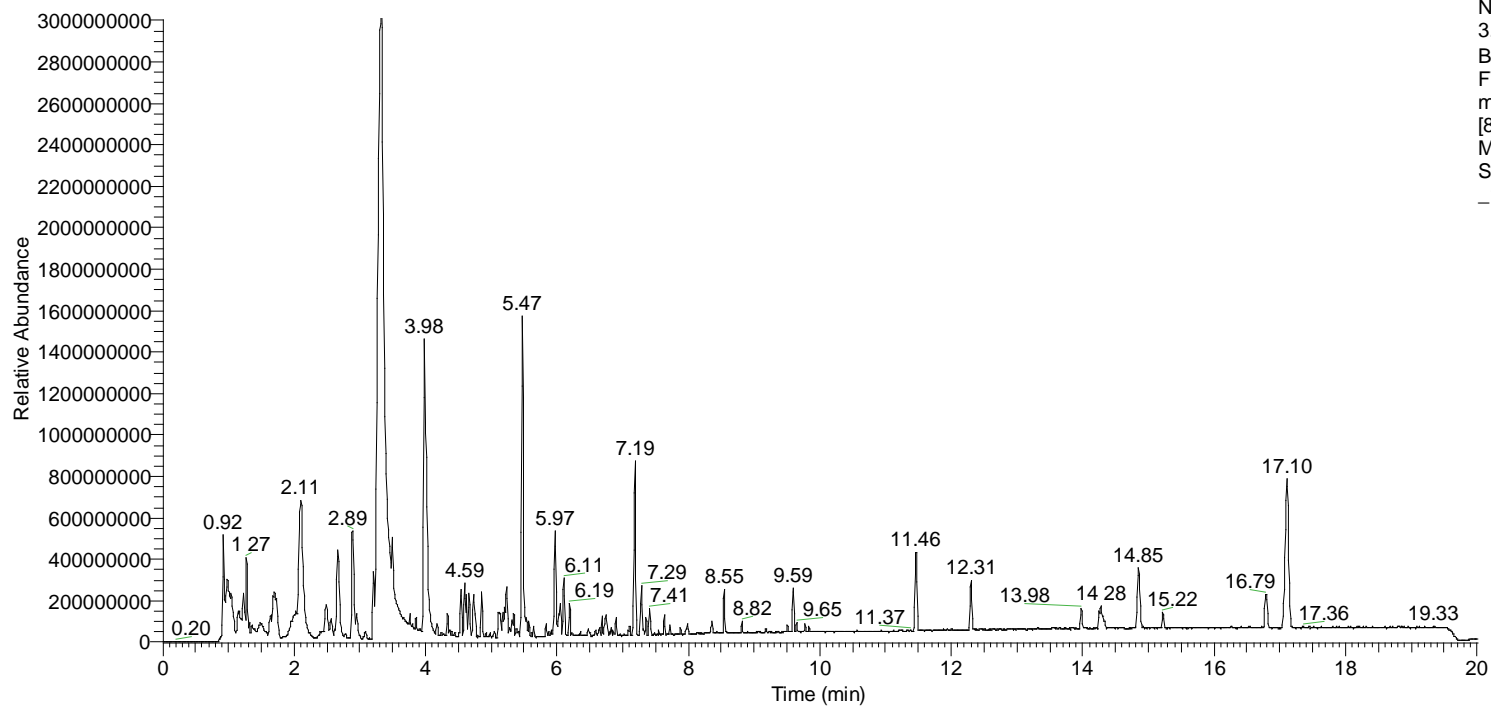
RT: 0.00 - 20.01



NL: 3.00E9
Base Peak F:
FTMS + p ESI Full
ms [80.00-800.00]
MS
Blank_RPEP_1501
932_01_1A

Figure 4 **RP-HESI-Pos_Blank_1501932_01_1A**

RT: 0.00 - 20.01



NL:
3.00E9
Base Peak F:
FTMS + p ESI Full
ms
[80.00-800.00]
MS
SST_1501930_01
_1A

Figure 5 **RP-HESI-Pos_SST_1501930_01_1A**

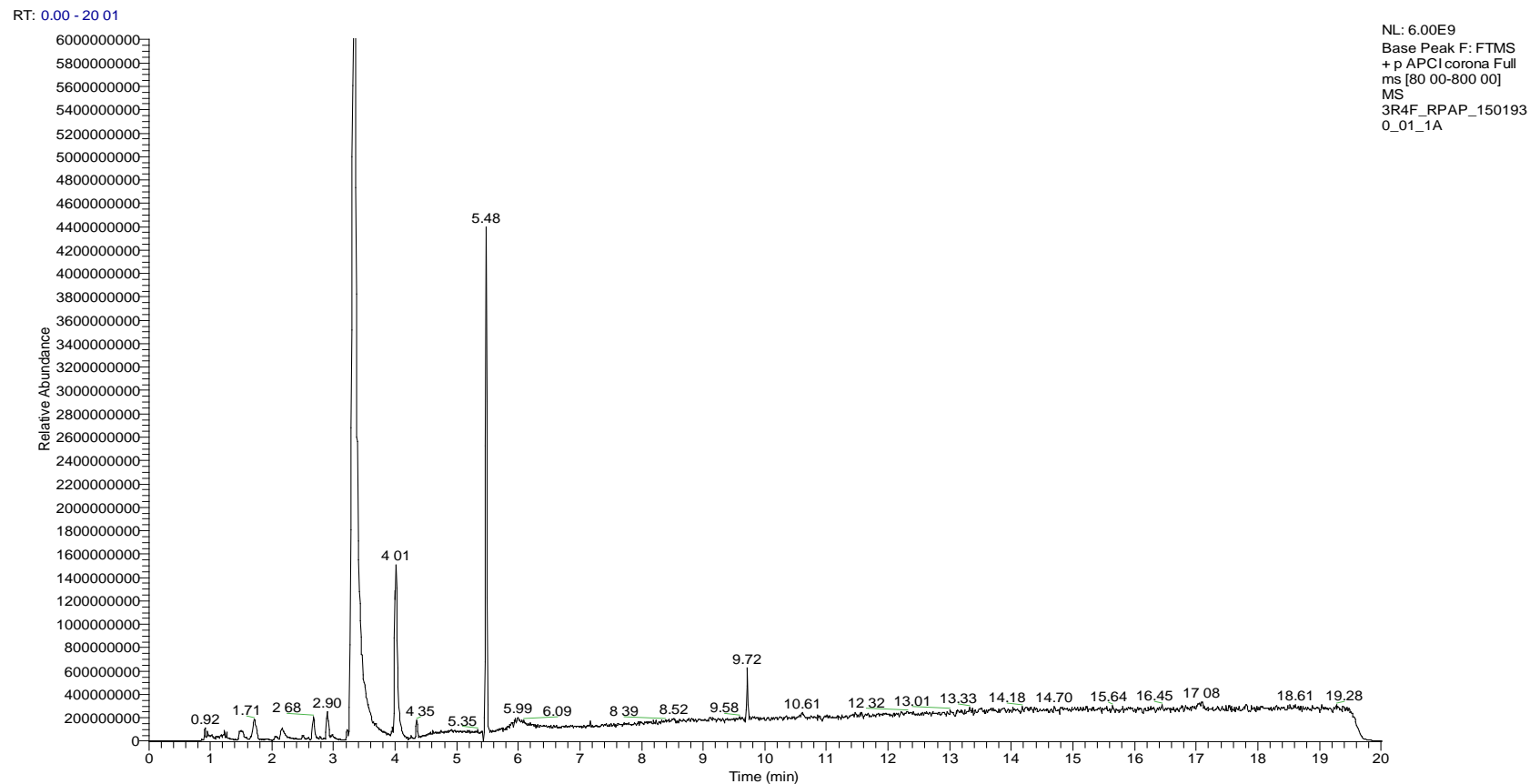


Figure 6 RP-APCI-Pos_3R4F_1501930_01_1A

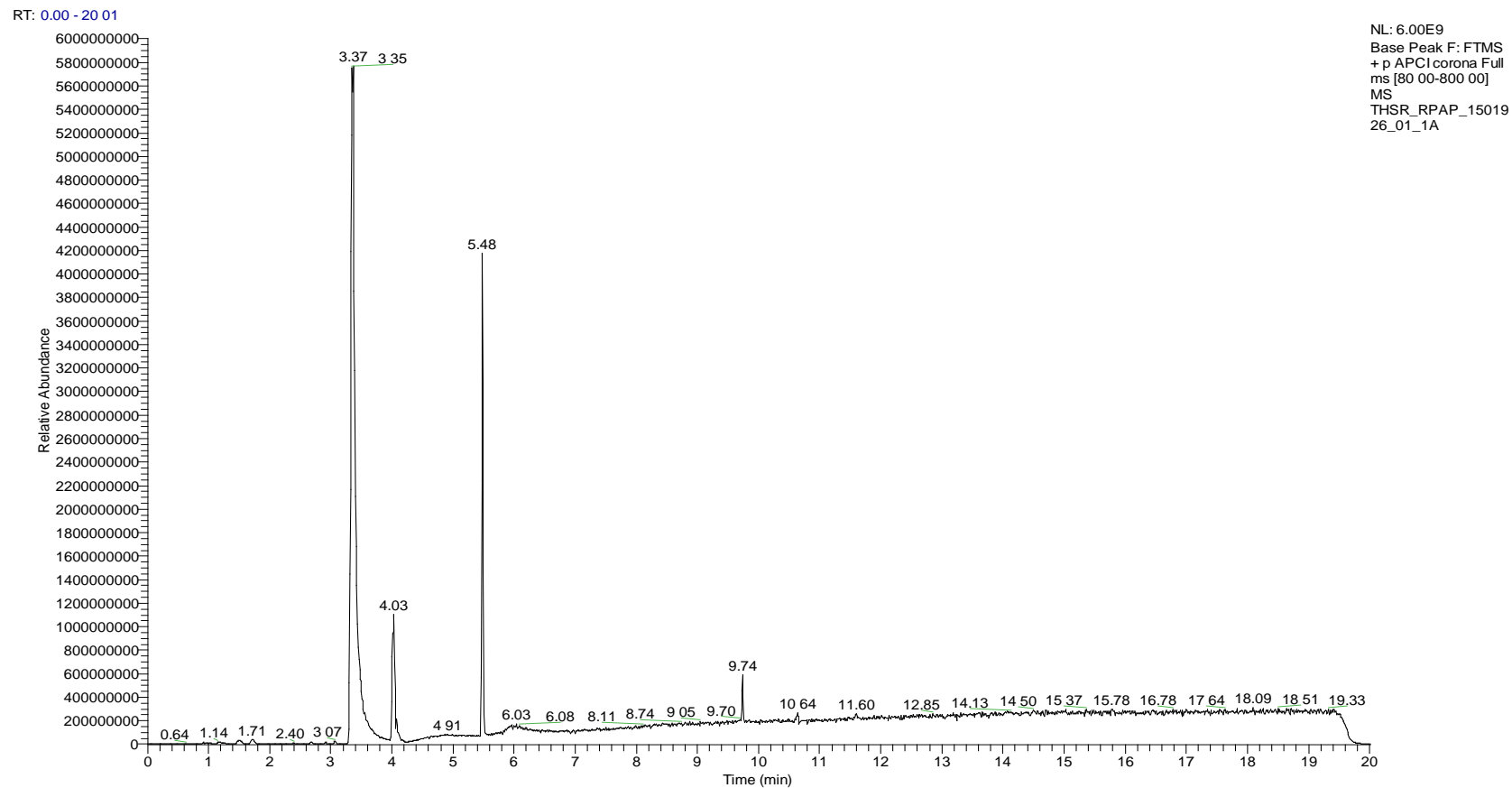


Figure 7 RP-APCI-Pos_THSR_1501926_01_1A

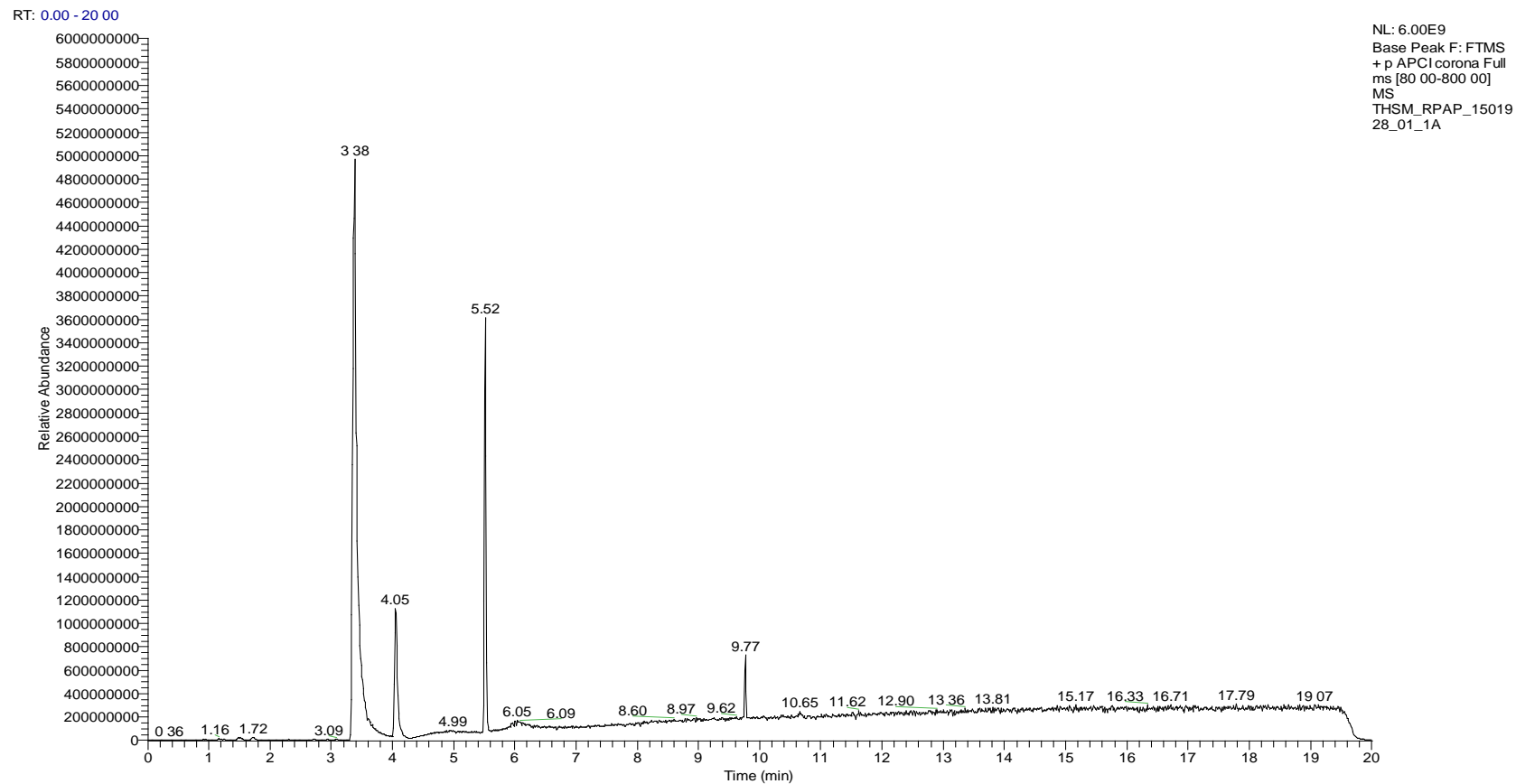


Figure 8 RP-APCI-Pos_THSM_1501928_01_1A

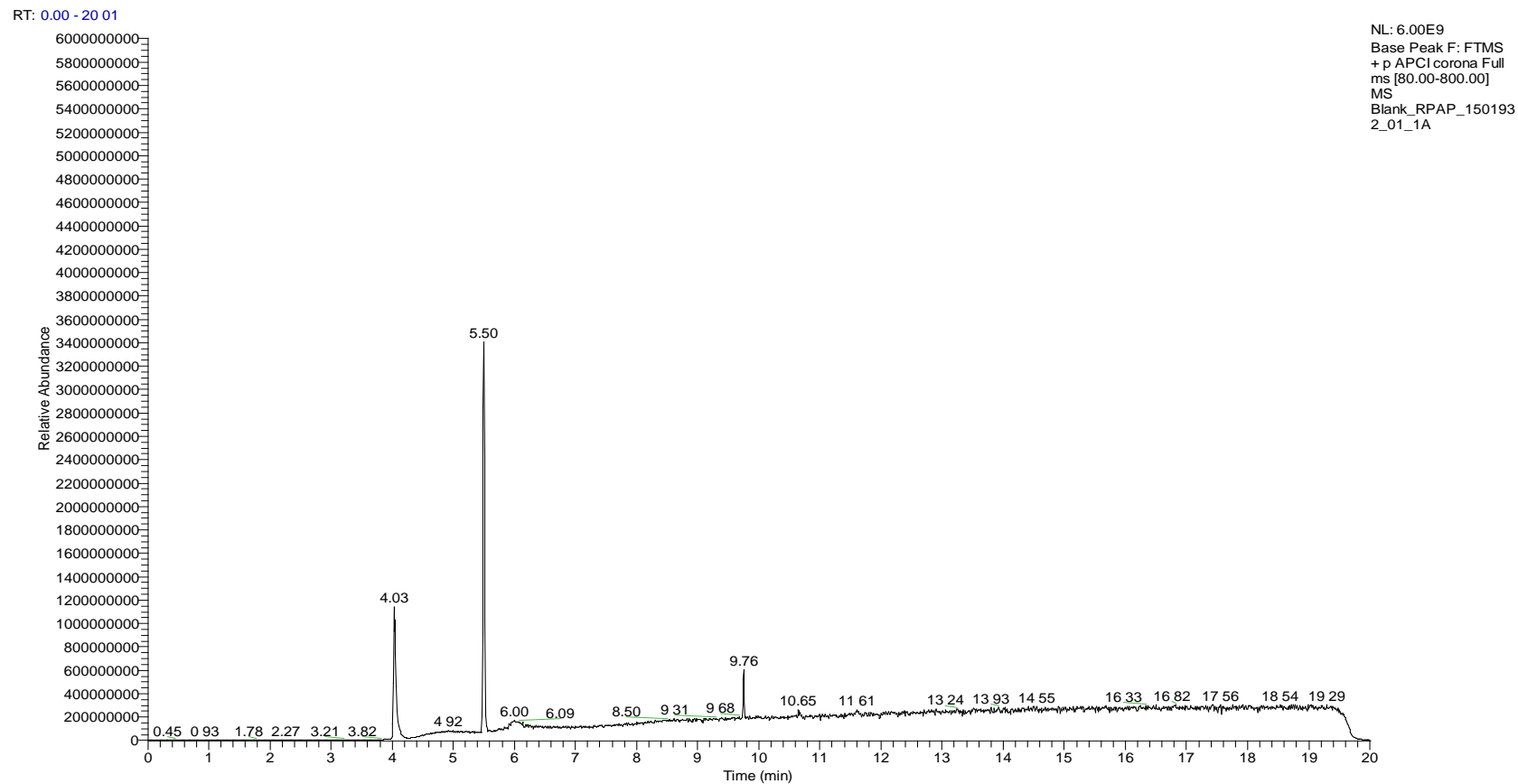


Figure 9 RP-APCI-Pos_Blank_1501932_01_1A

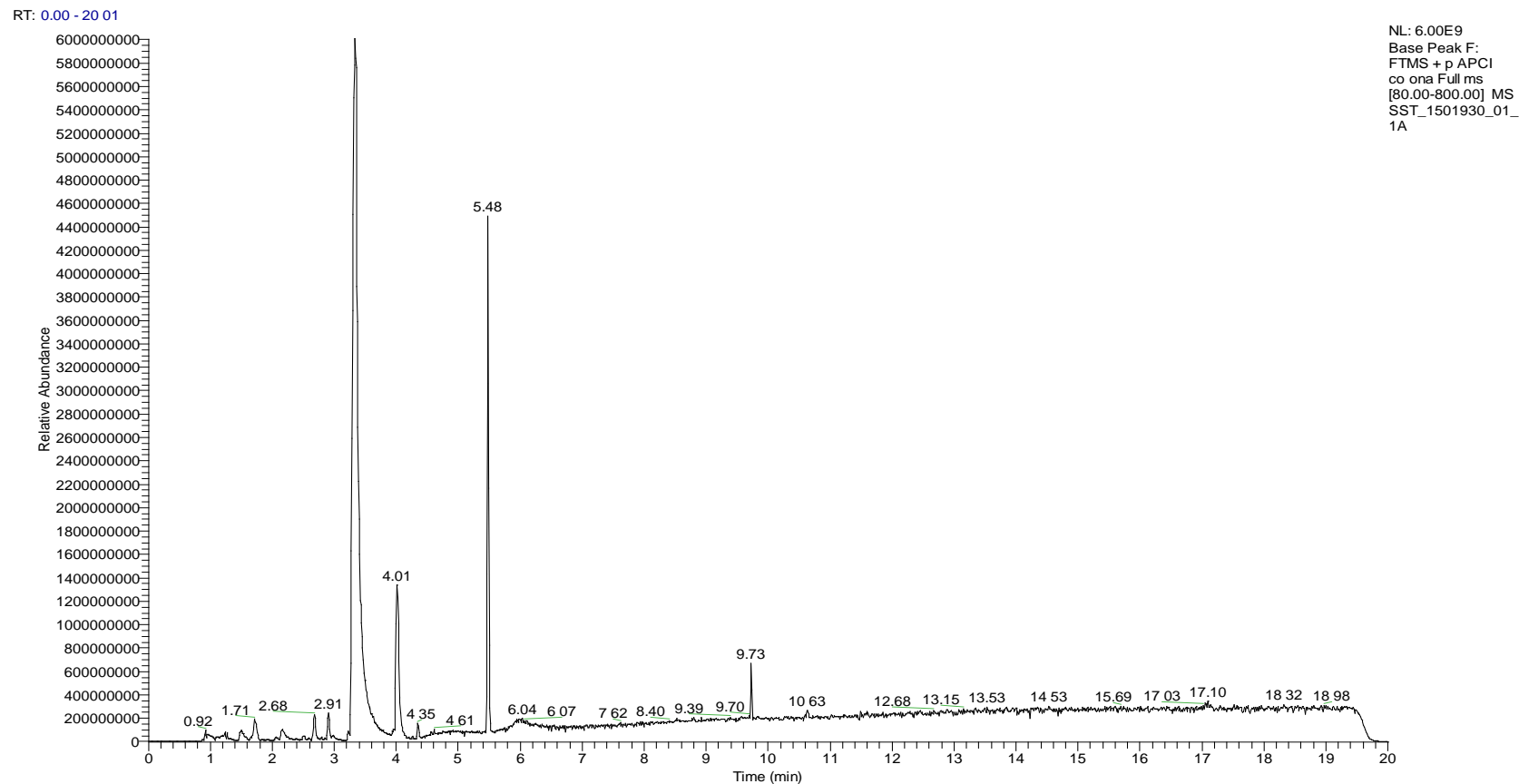


Figure 10 RP-APCI-Pos_SST_1501930_01_1A

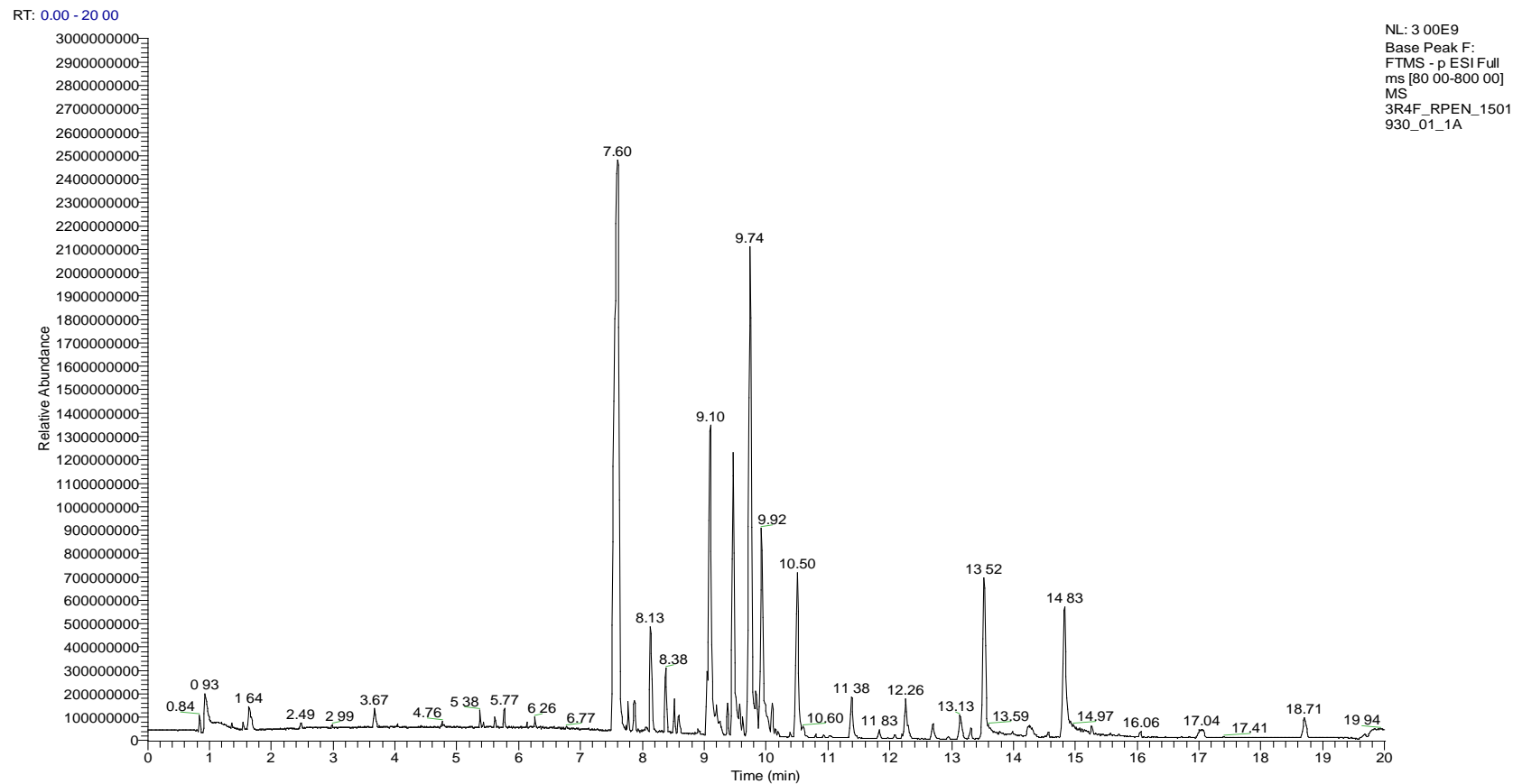


Figure 11 RP-HESI-Neg_3R4F_1501930_01_1A

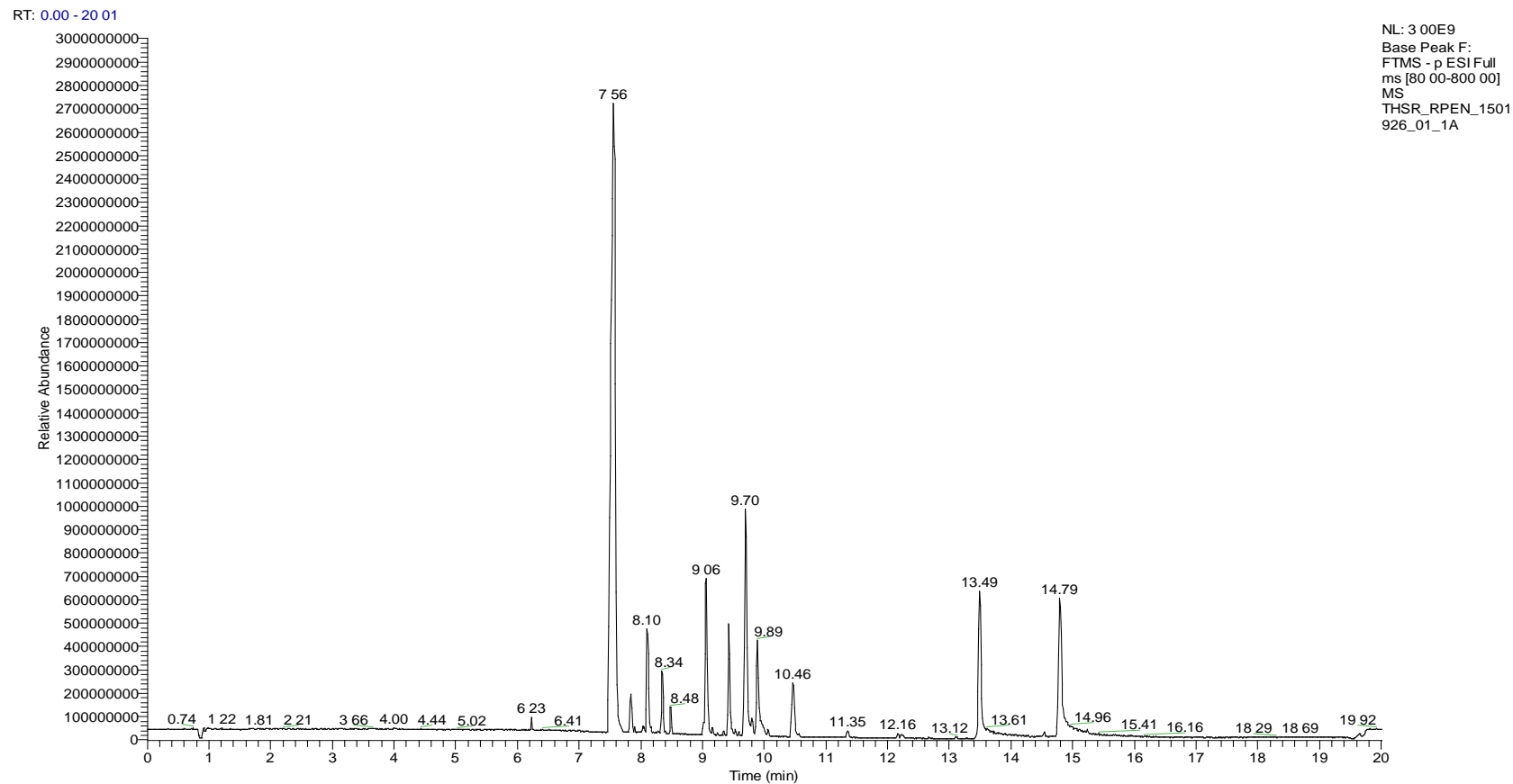


Figure 12 RP-HESI-Neg_THSR_1501926_01_1A

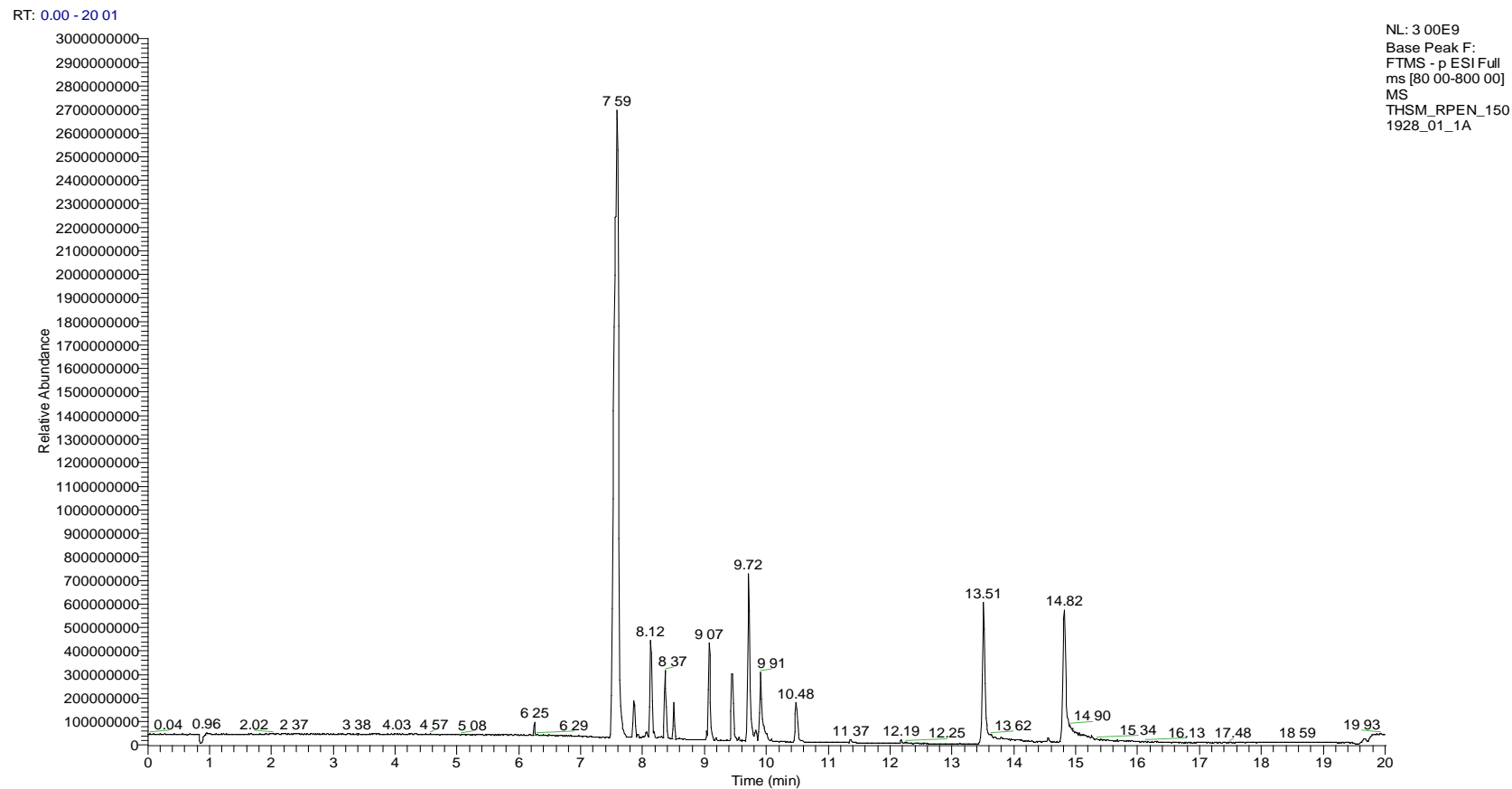


Figure 13 RP-HESI-Neg_THSM_1501928_01_1A

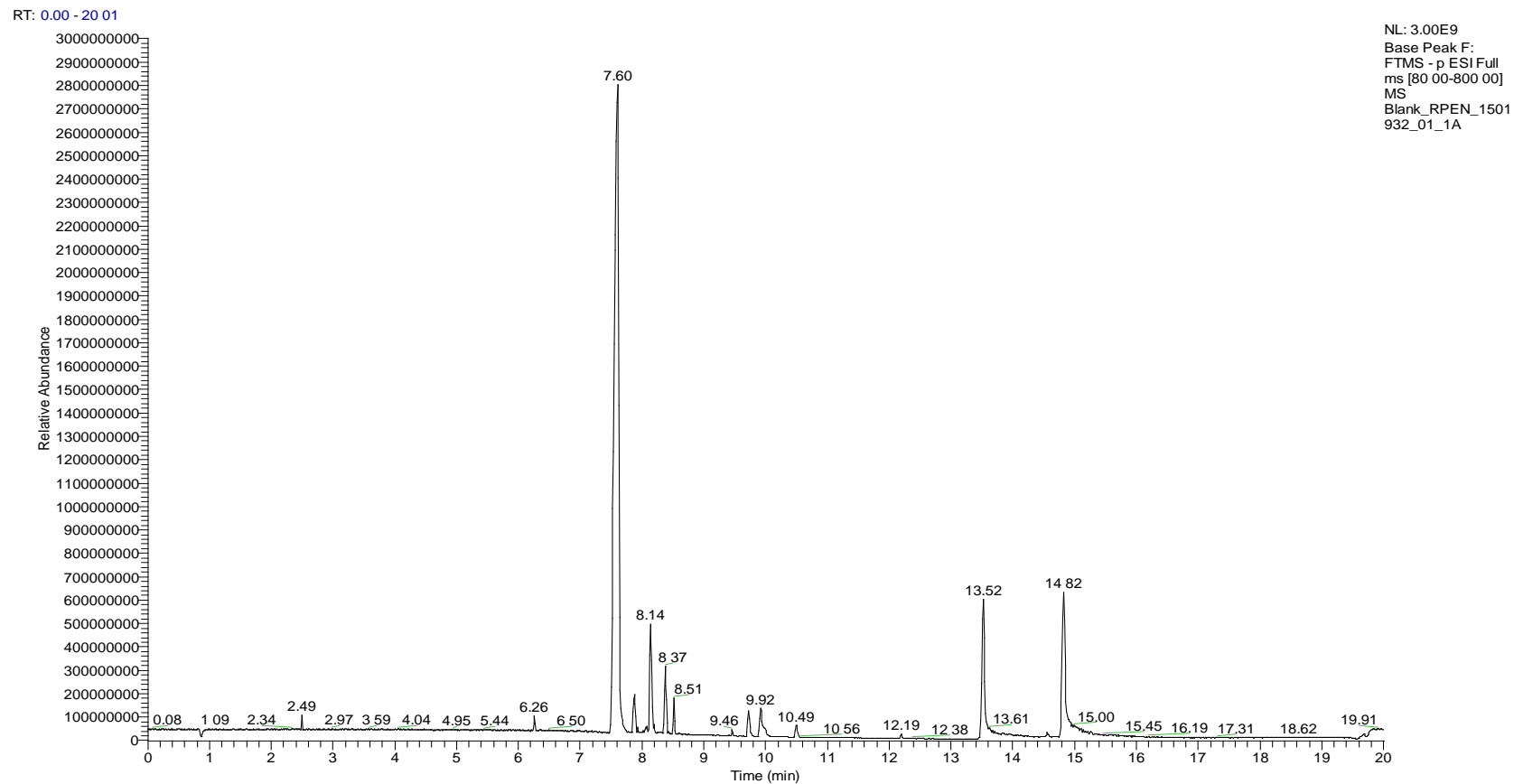
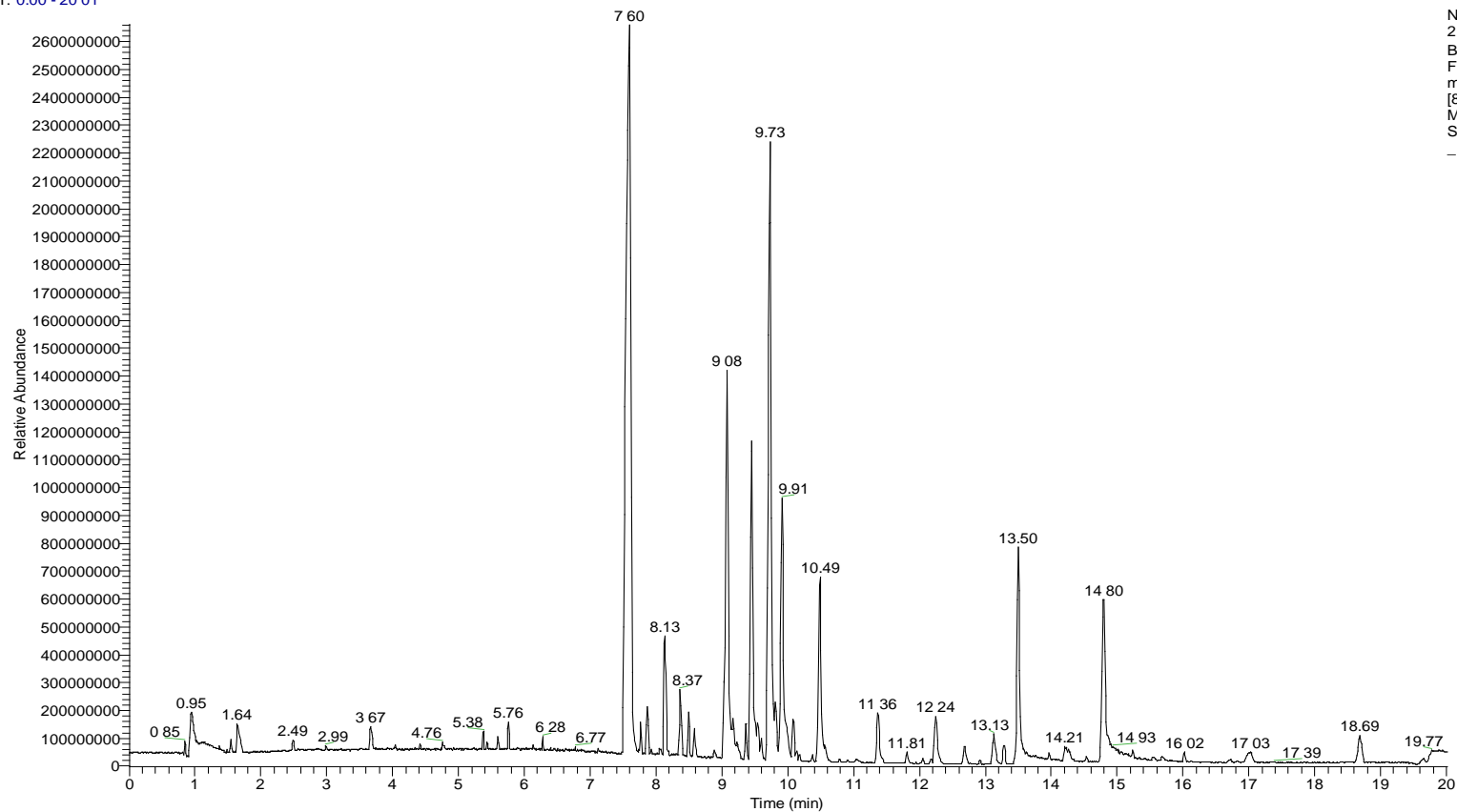


Figure 14 RP-HESI-Neg_Blank_1501932_01_1A

RT: 0.00 - 20.01



NL:
2.66E9
Base Peak F:
FTMS - p ESI Full
ms
[80.00-800.00]
MS
SST_1501930_01
_1A

Figure 15 **RP-HESI-Neg_SST_1501930_01_1A**

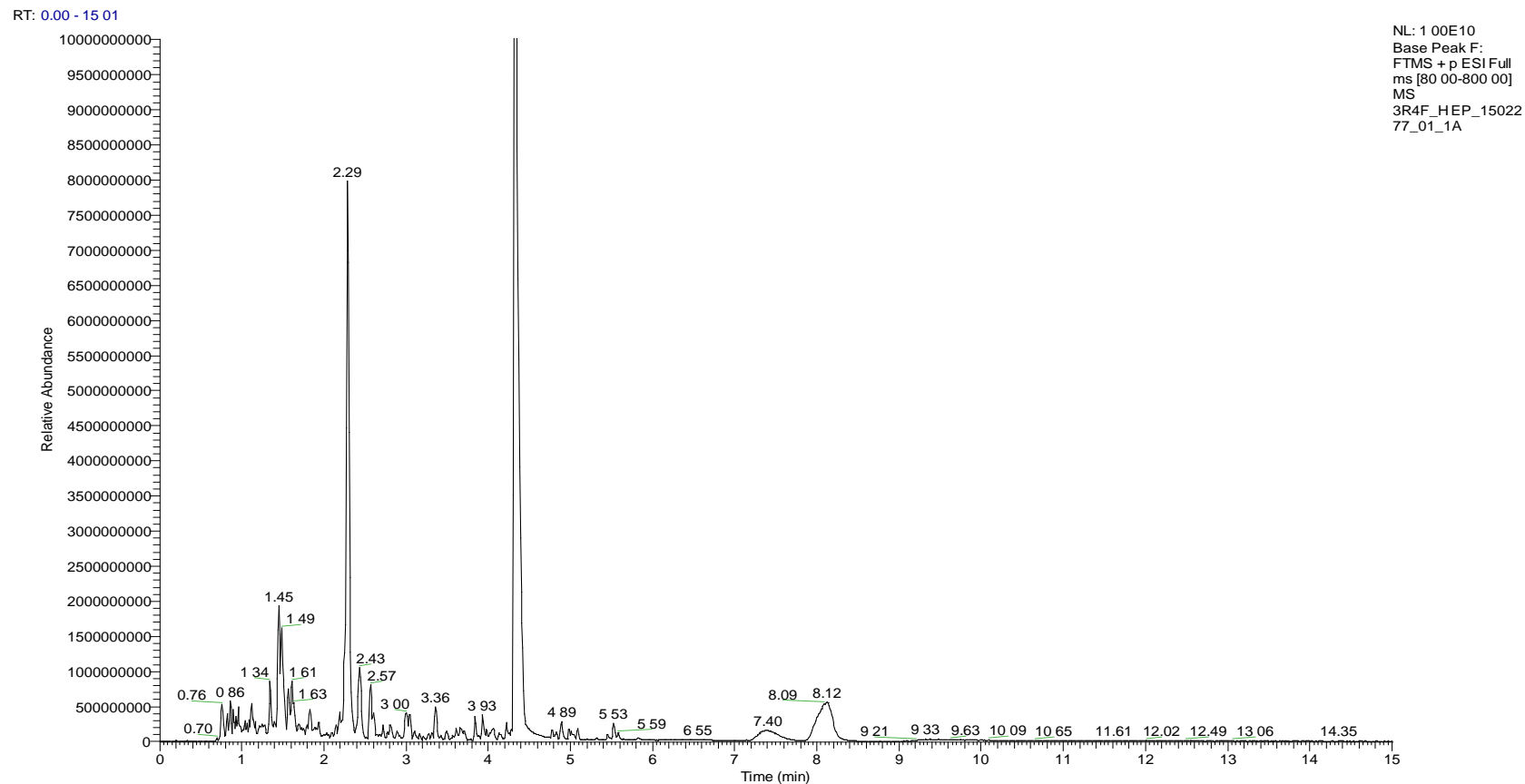


Figure 16 HILIC-HESI-Pos_3R4F_1502277_01_1A

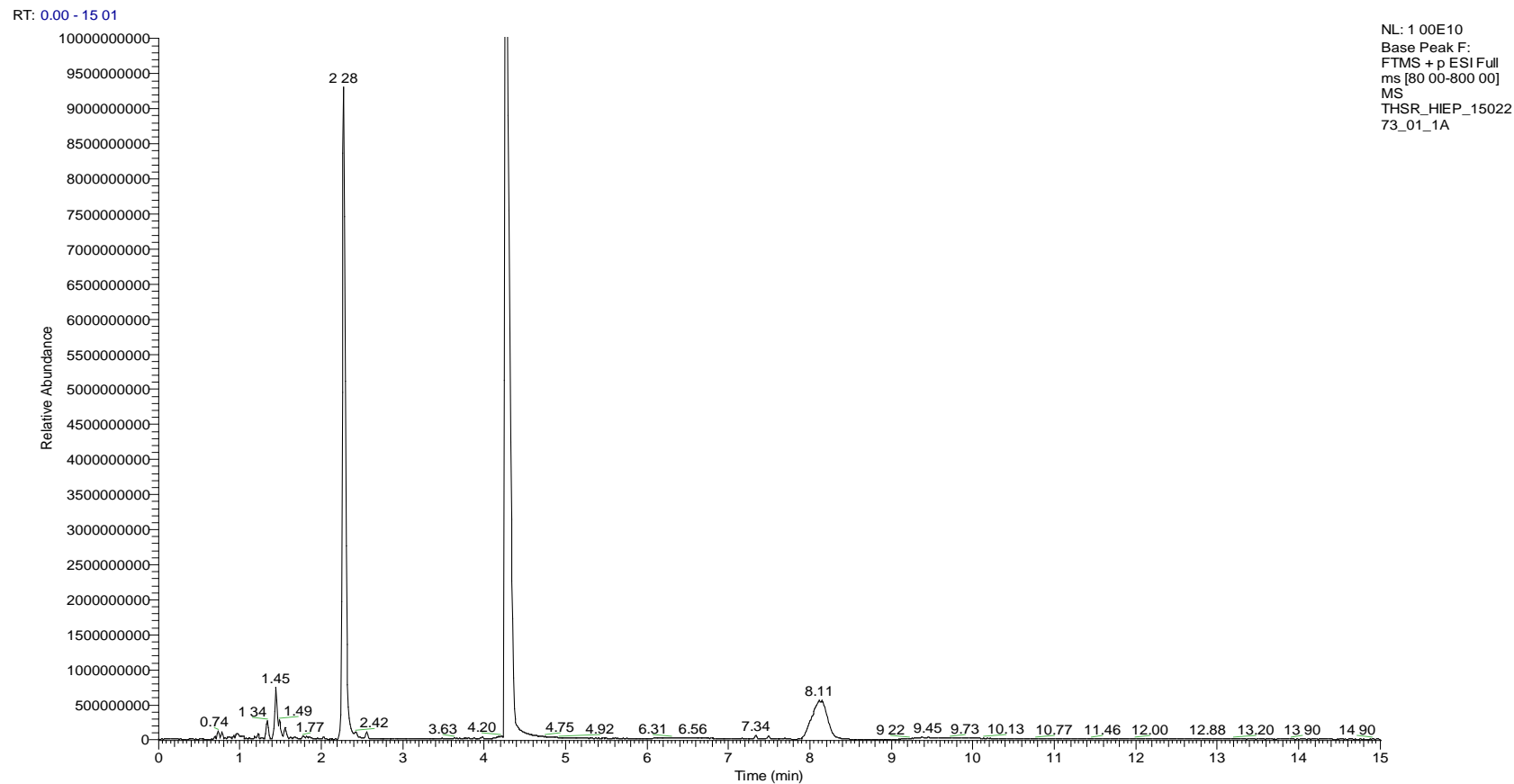


Figure 17 HILIC-HESI-Pos_THSR_1502273_01_1A

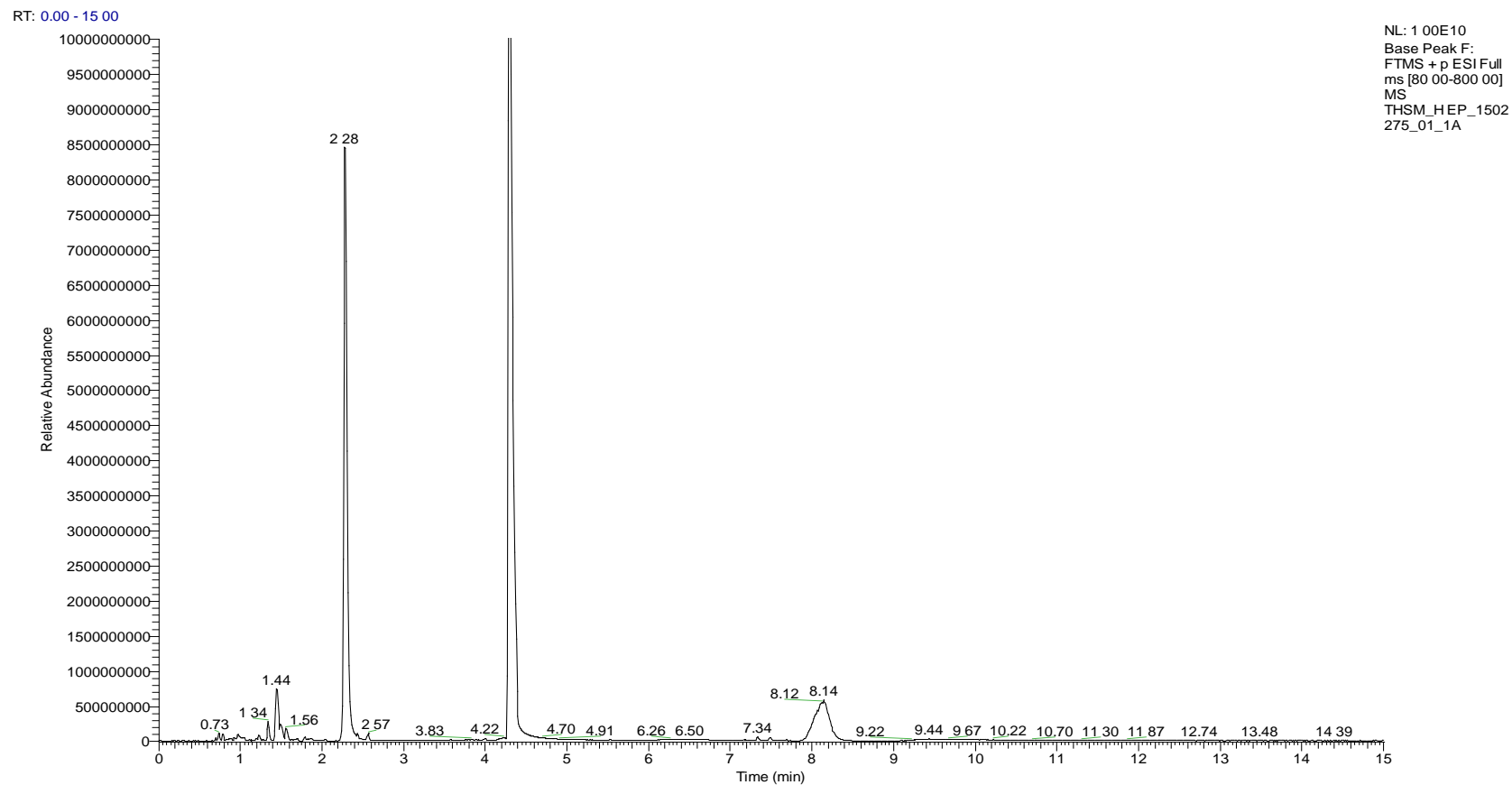


Figure 18 HILIC-HESI-Pos_THSM_1502275_01_1A

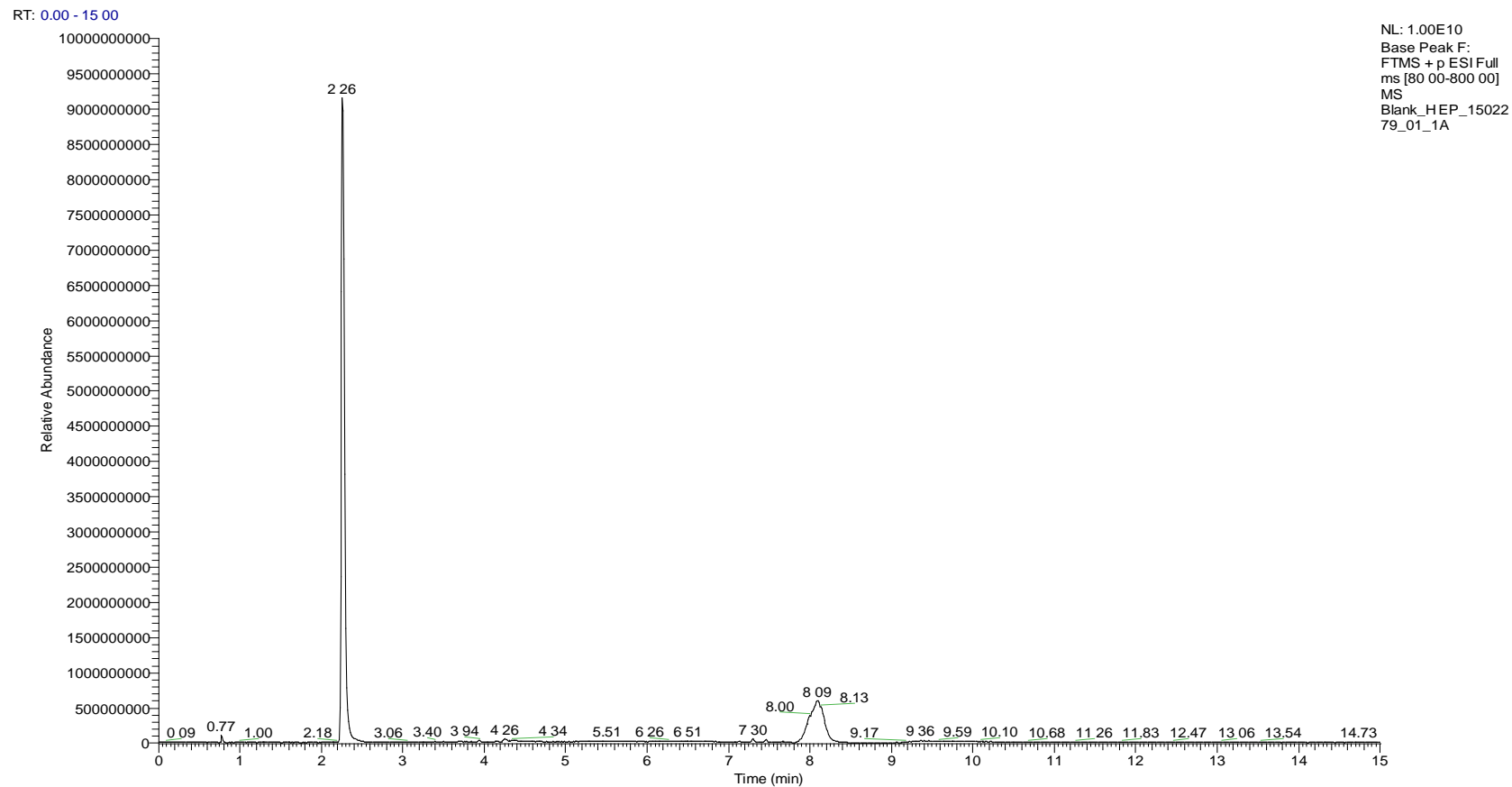


Figure 19 HILIC-HESI-Pos_Blank_1502279_01_1A

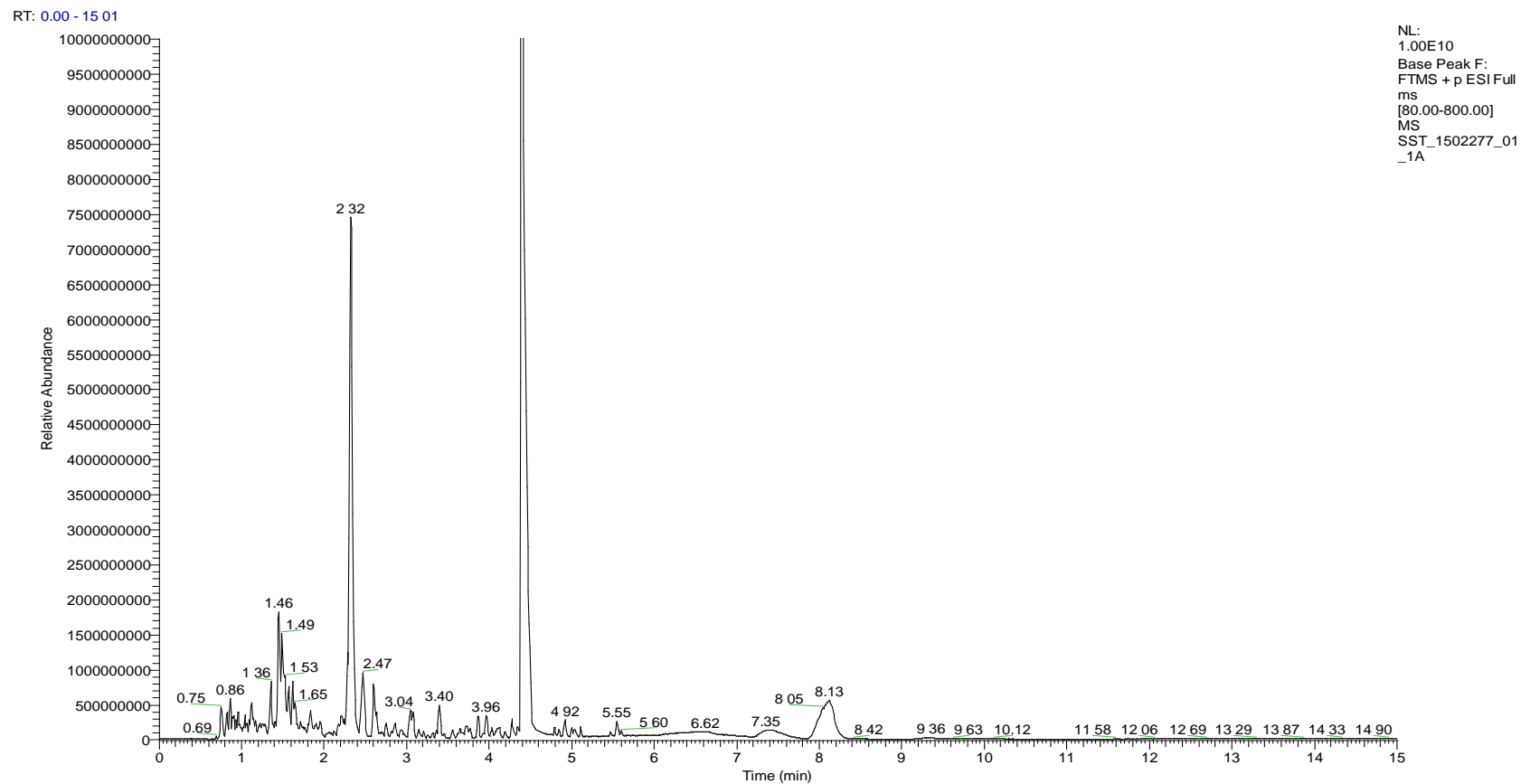


Figure 20 HILIC-HESI-Pos_SST_1502277_01_1A

ABBREVIATIONS

Abbreviations		
APCI	:	Atmospheric Pressure Chemical Ionization
HESI	:	Heated Electrospray Ionization
HILIC	:	Hydrophilic Interaction Chromatography
LC-HRAM-MS	:	Liquid Chromatography with High Resolution Accurate Mass Spectrometry
Neg	:	Negative
NTDS	:	Non Targeted Differential Screening
Pos	:	Positive
RP	:	Reversed Phase Chromatography
SST	:	System Suitability Test
THSM	:	THS 2.2 Dorado I Vinny Low
THSR	:	THS 2.2 Dorado II Ron