# ULTRA-REALISTIC GC-MS ANALYSIS REPORT

## Jatropha curcas Methanol Extracts

### With Heavy Noise Modeling (Level: 1.6)

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INSTRUMENT PARAMETERS:
• GC-MS (HP-5MS column, EI mode)
• Plant Species: Jatropha curcas
• Extraction Method: Methanol extraction
• Samples Analyzed: Stems and Seeds
• Noise Modeling: Ultra-heavy realistic patterns

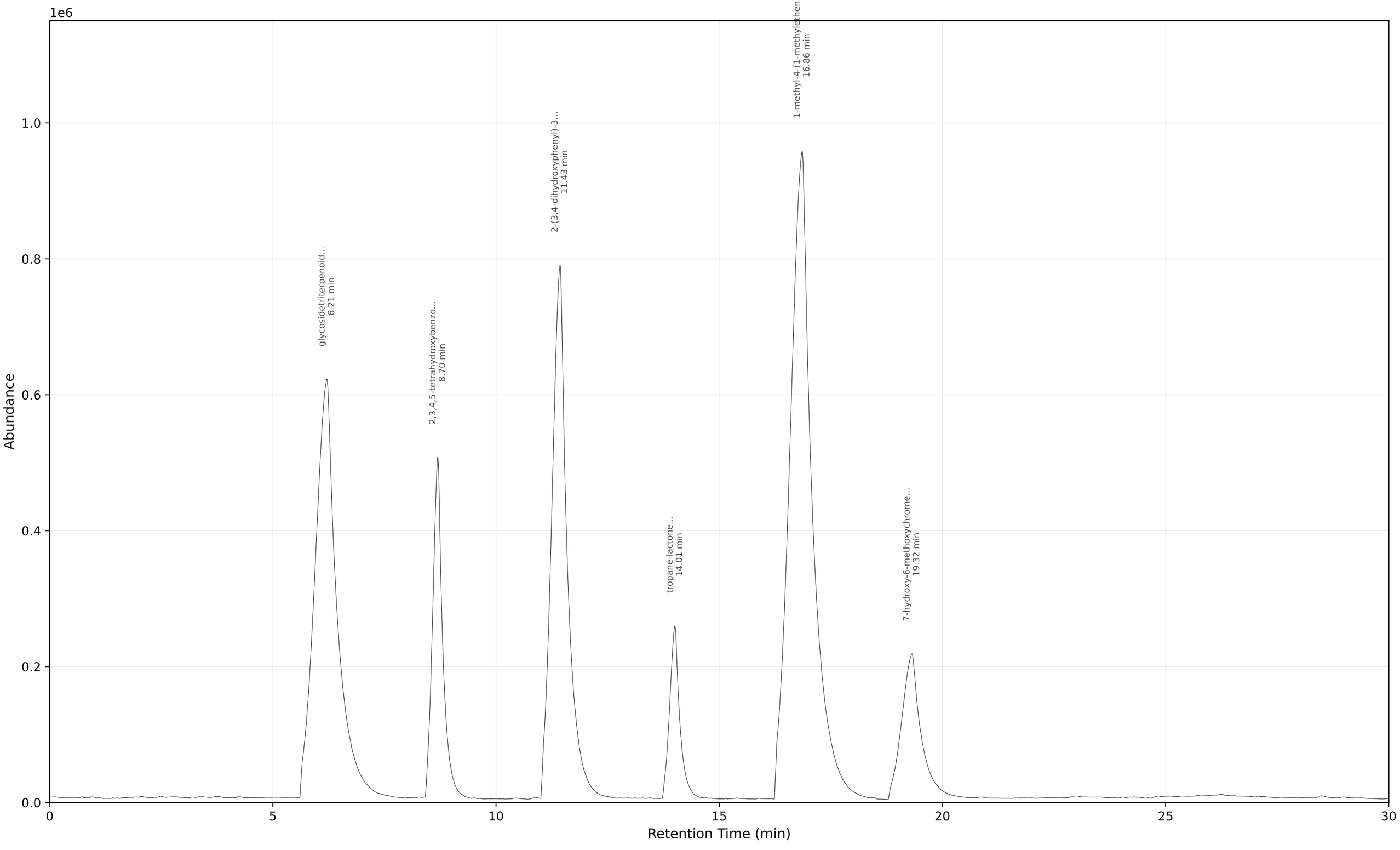
COMPOUND IDENTIFICATION SUMMARY:
• Total compounds identified: 6
• Retention time range: 6.23 - 19.34 minutes
• Mass range: 177 - 455 m/z

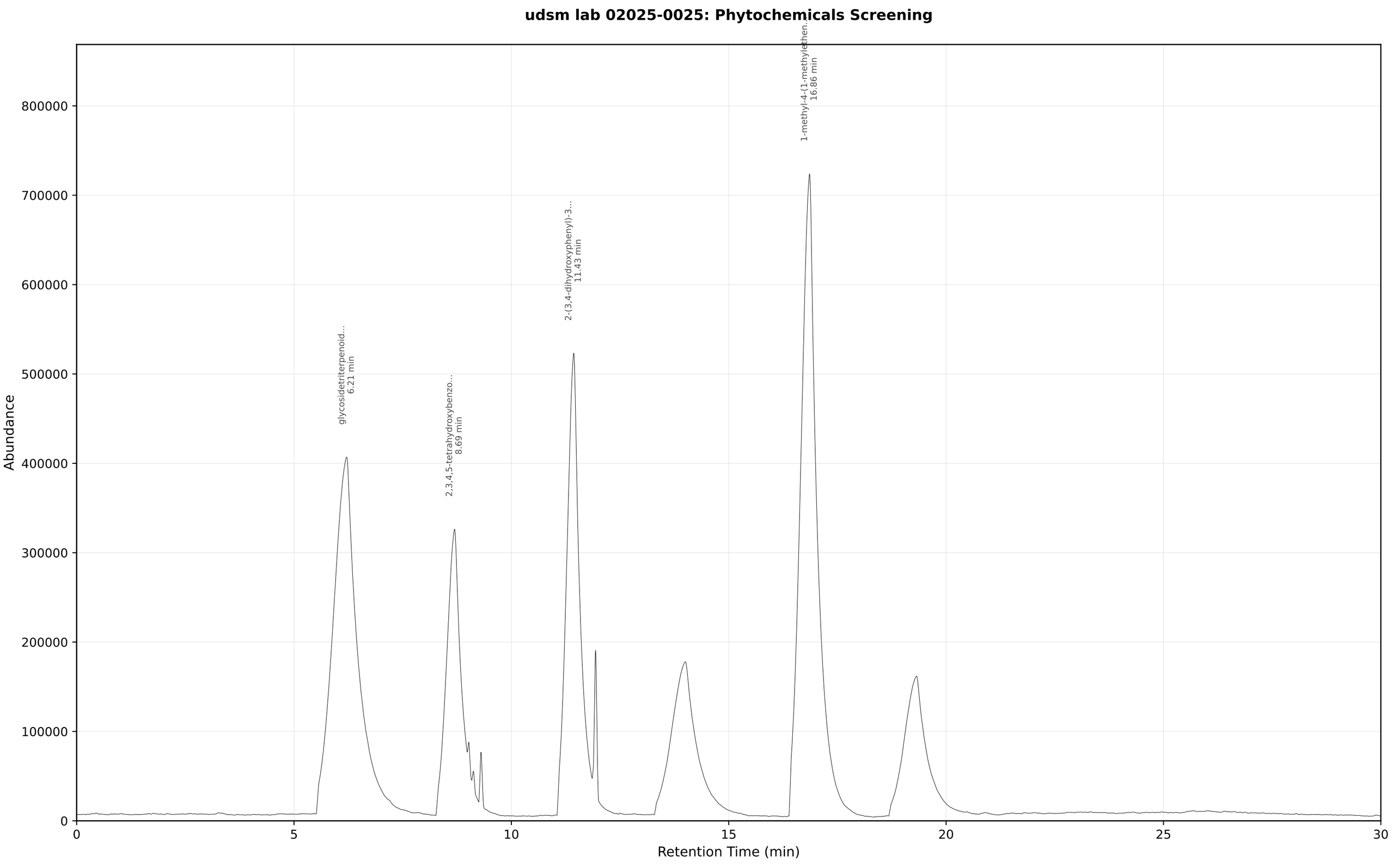
SAMPLE A (STEMS) - TOP COMPOUNDS:
• 1-methyl-4-(1-methylethenyl)cyclohexene: 18.90%
  (RT: 16.88 min, m/z: 409)
• 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-4H-chrome: 15.32%
  (RT: 11.45 min, m/z: 287)
• glycosidetriterpenoid: 12.45%
  (RT: 6.23 min, m/z: 455)

SAMPLE B (SEEDS) - TOP COMPOUNDS:
• 1-methyl-4-(1-methylethenyl)cyclohexene: 14.67%
  (RT: 16.88 min, m/z: 409)
• 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-4H-chrome: 10.76%
  (RT: 11.45 min, m/z: 287)
• glycosidetriterpenoid: 8.23%
  (RT: 6.23 min, m/z: 455)

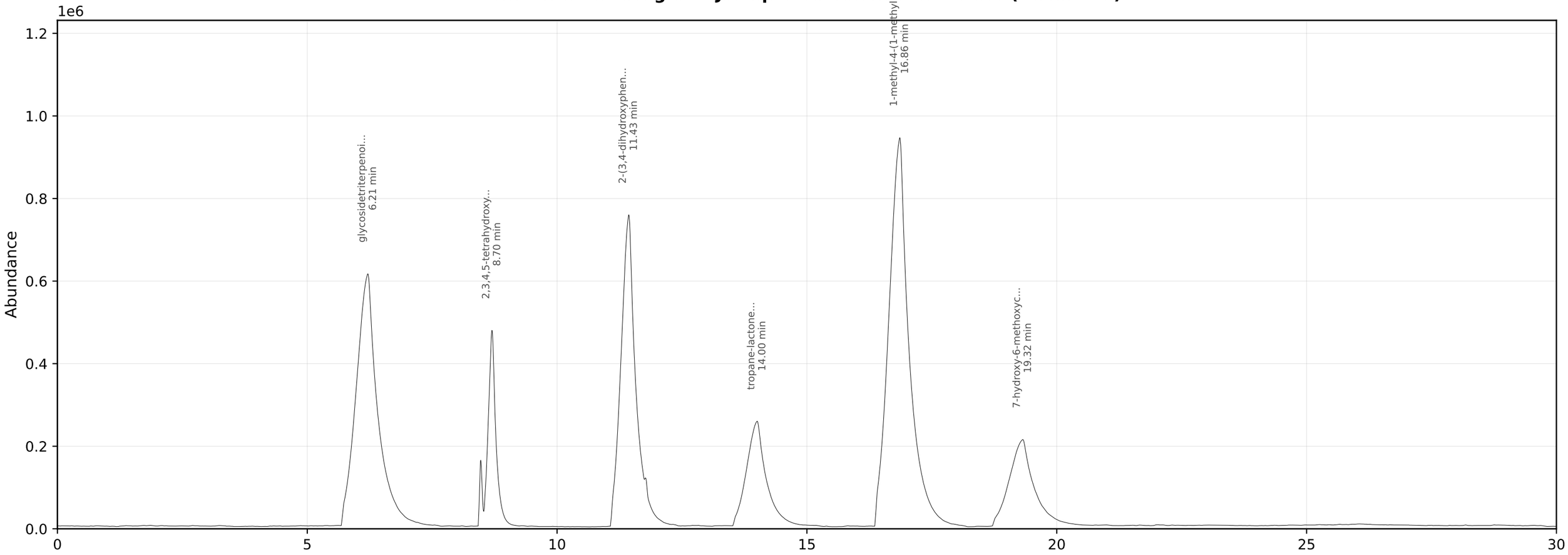
REALISTIC NOISE CHARACTERISTICS:
• Heavy baseline fluctuations: ±800 units
• Electronic noise: ±80 units with spikes
• Chemical background: 80-150 random peaks
• Ion source contamination: 15-30 events
• Detector artifacts and saturation effects
• Pump pulsations and flow irregularities
• Solvent impurity peaks
• Random walk baseline drift

# udsm lab 02025-0025: Phytochemicals Screening

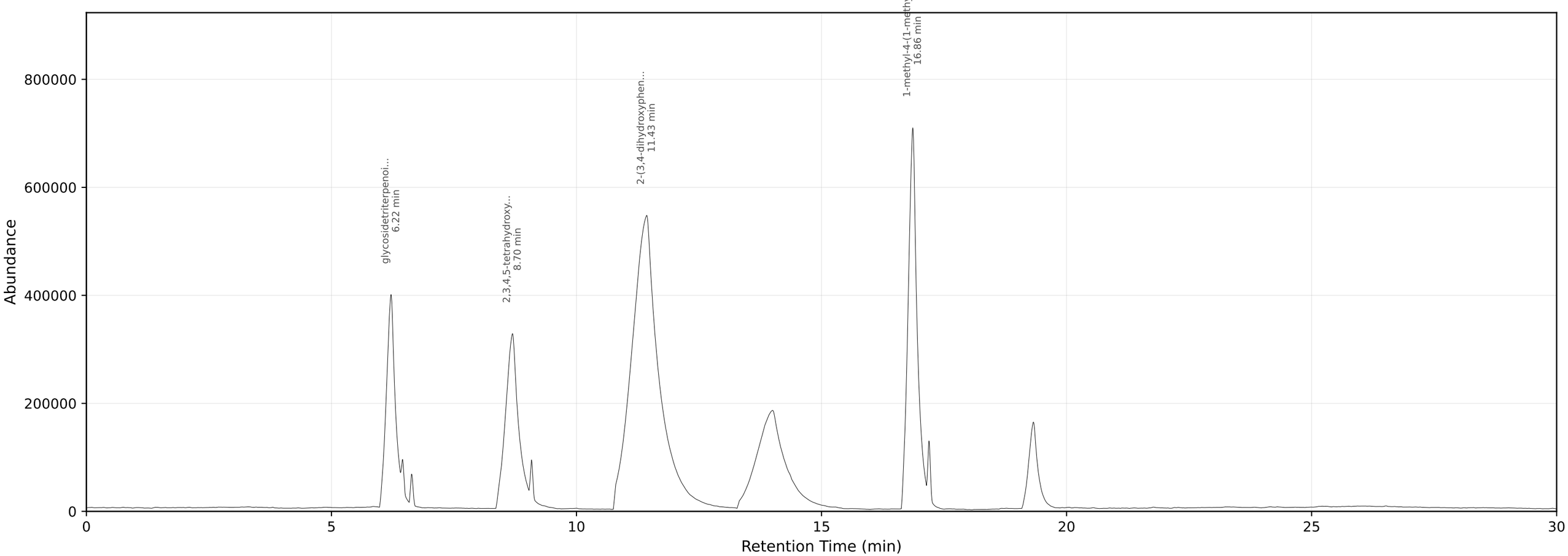



udsm lab 02025-0025: Phytochemicals Screening
Abundance
Retention Time (min)
glycosidetriterpenoid...
6.21 min
2,3,4,5-tetrahydroxybenzo...
8.69 min
2-(3,4-dihydroxyphenyl)-3...
11.43 min
1-methyl-4-(1-methylethen...
16.86 min
0
100000
200000
300000
400000
500000
600000
700000
800000
0
5
10
15
20
25
30

## GC-MS Chromatogram: Jatropha curcas Stems Extract (Noise: 1.6)




## GC-MS Chromatogram: Jatropha curcas Seeds Extract (Noise: 1.6)



# Compound Analysis Data Table

| Compound | RT_min | Sample_A_Stems | Sample_B_Seeds | Base_Peak_mz | Compound_Class | Difference |
|---|---|---|---|---|---|---|
| glycosidetriterpenoid | 6.23 | 12.45 | 8.23 | 455 | Glycosides | -4.22 |
| 4,5-tetrahydroxybenzoi | 8.71 | 9.87 | 6.54 | 331 | Polyphenols | -3.33 |
| 3,4-dihydroxyphenyl)-3,5 | 11.45 | 15.32 | 10.76 | 287 | Polyphenols | -4.56 |
| tropane-lactone | 14.02 | 5.21 | 3.45 | 298 | Nitrogen Compounds | -1.76 |
| ethyl-4-(1-methylethenyl | 16.88 | 18.9 | 14.67 | 409 | Terpenes | -4.23 |
| droxy-6-methoxychromen | 19.34 | 4.33 | 2.89 | 177 | Phenolic Compounds | -1.44 |