ULTRA-REALISTIC GC-MS ANALYSIS REPORT

Jatropha curcas Methanol Extracts

With Heavy Noise Modeling (Level: 1.4)

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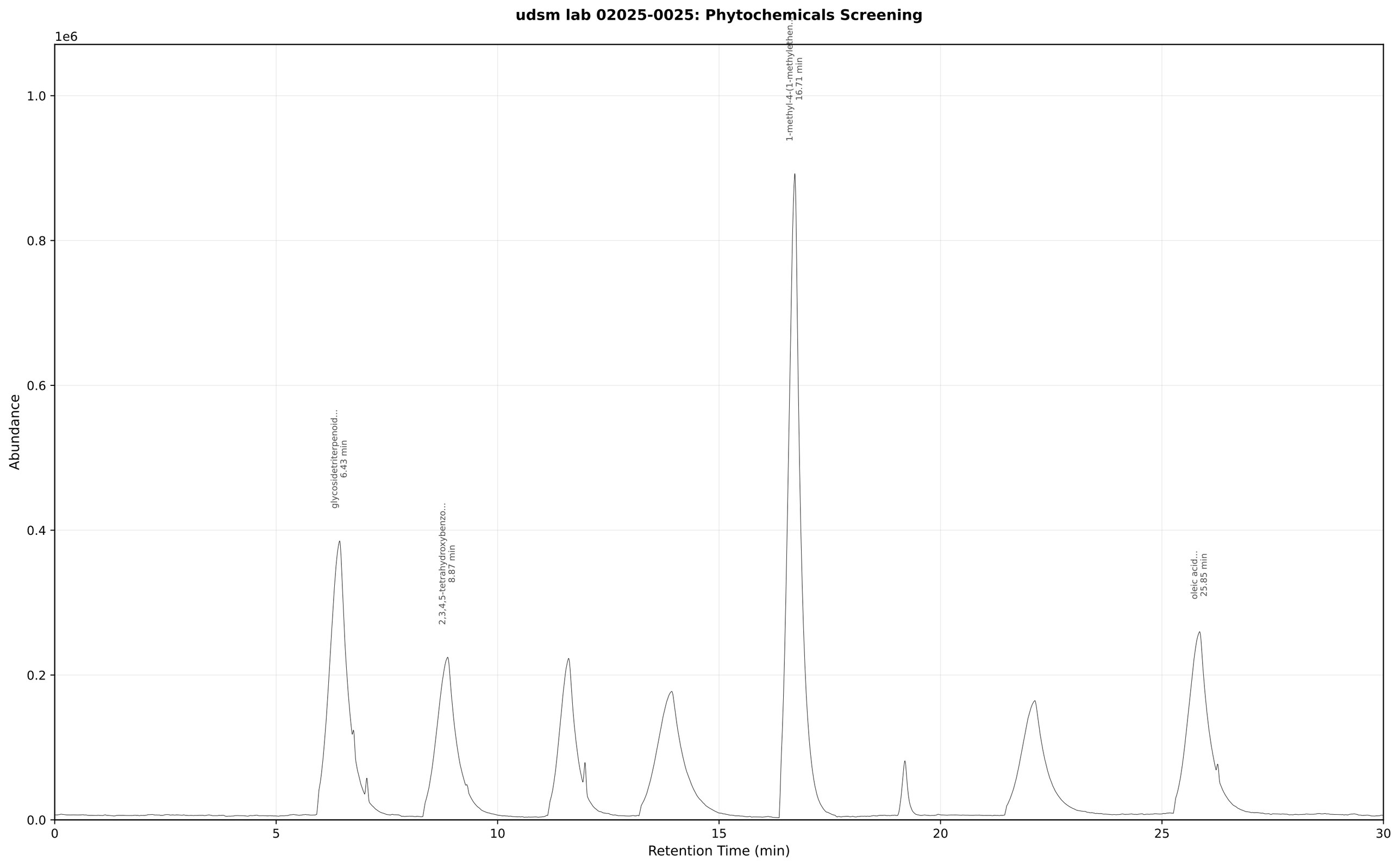
INSTRUMENT PARAMETERS:
• GC-MS (HP-5MS column, EI mode)
• Plant Species: Jatropha curcas
• Extraction Method: Methanol extraction
• Samples Analyzed: Stems and Seeds
• Noise Modeling: Ultra-heavy realistic patterns

COMPOUND IDENTIFICATION SUMMARY:
• Total compounds identified: 8
• Retention time range: 6.45 - 25.87 minutes
• Mass range: 179 - 457 m/z

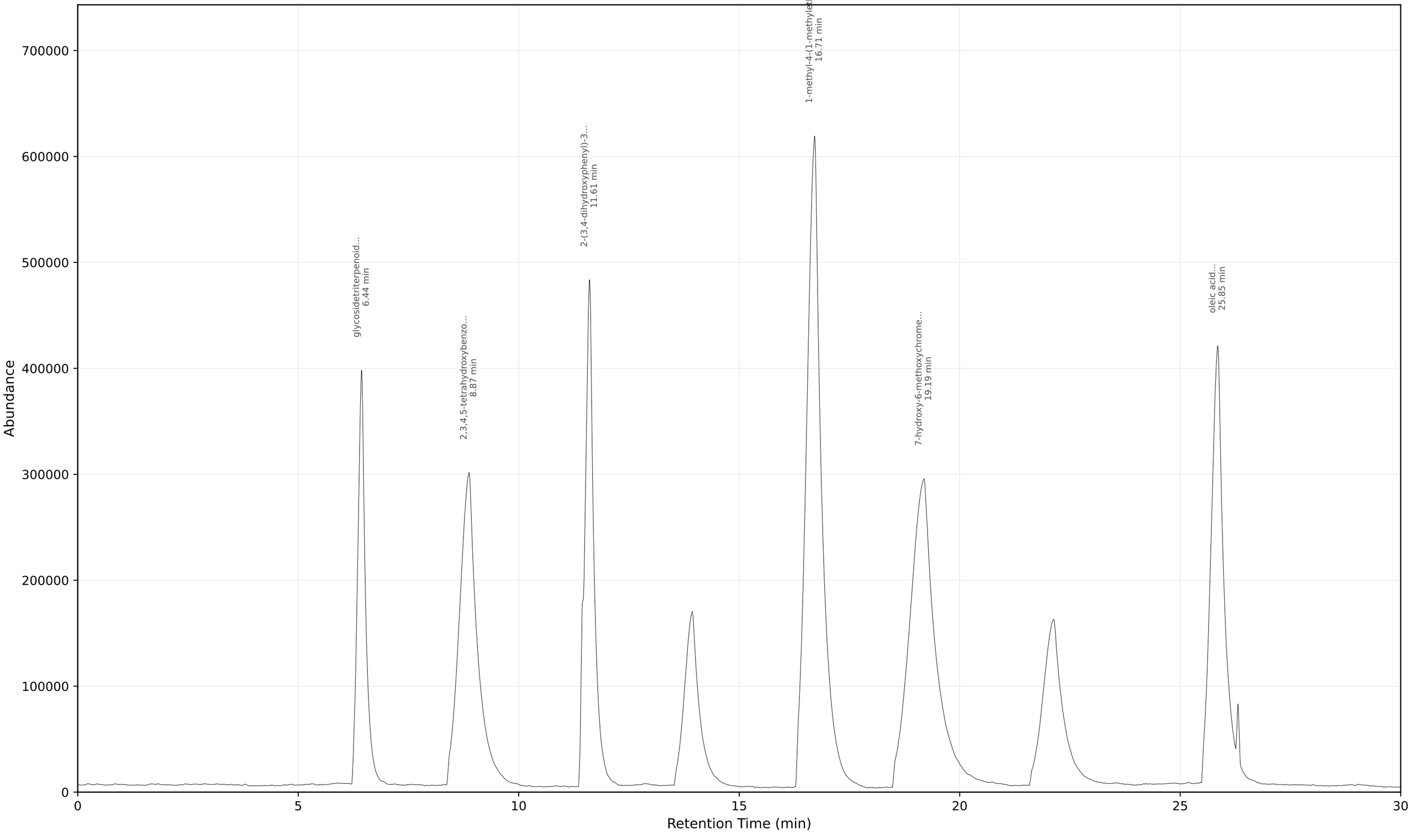
SAMPLE A (STEMS) - TOP COMPOUNDS:
• 1-methyl-4-(1-methylethenyl)cyclohexene: 17.45%
  (RT: 16.73 min, m/z: 411)
• glycosidetriterpenoid: 7.84%
  (RT: 6.45 min, m/z: 457)
• oleic acid: 5.67%
  (RT: 25.87 min, m/z: 284)

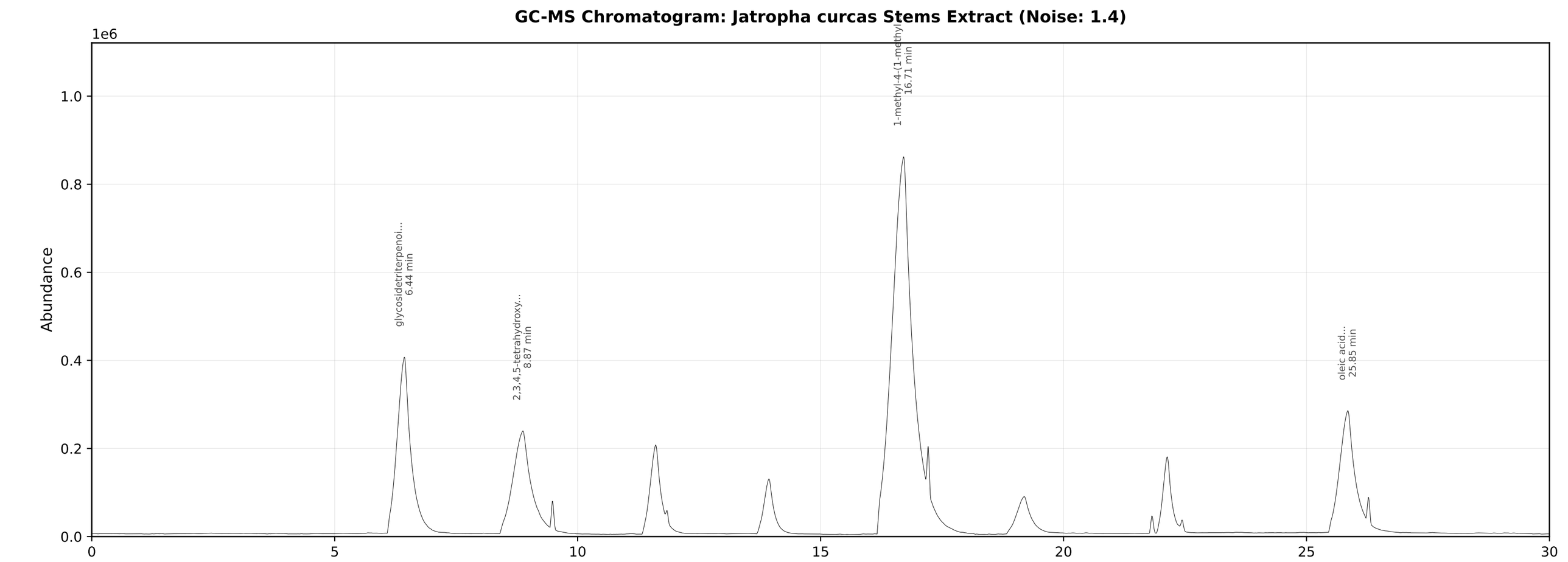
SAMPLE B (SEEDS) - TOP COMPOUNDS:
• 1-methyl-4-(1-methylethenyl)cyclohexene: 12.98%
  (RT: 16.73 min, m/z: 411)
• 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-4H-chrome: 9.41%
  (RT: 11.62 min, m/z: 289)
• oleic acid: 8.34%
  (RT: 25.87 min, m/z: 284)

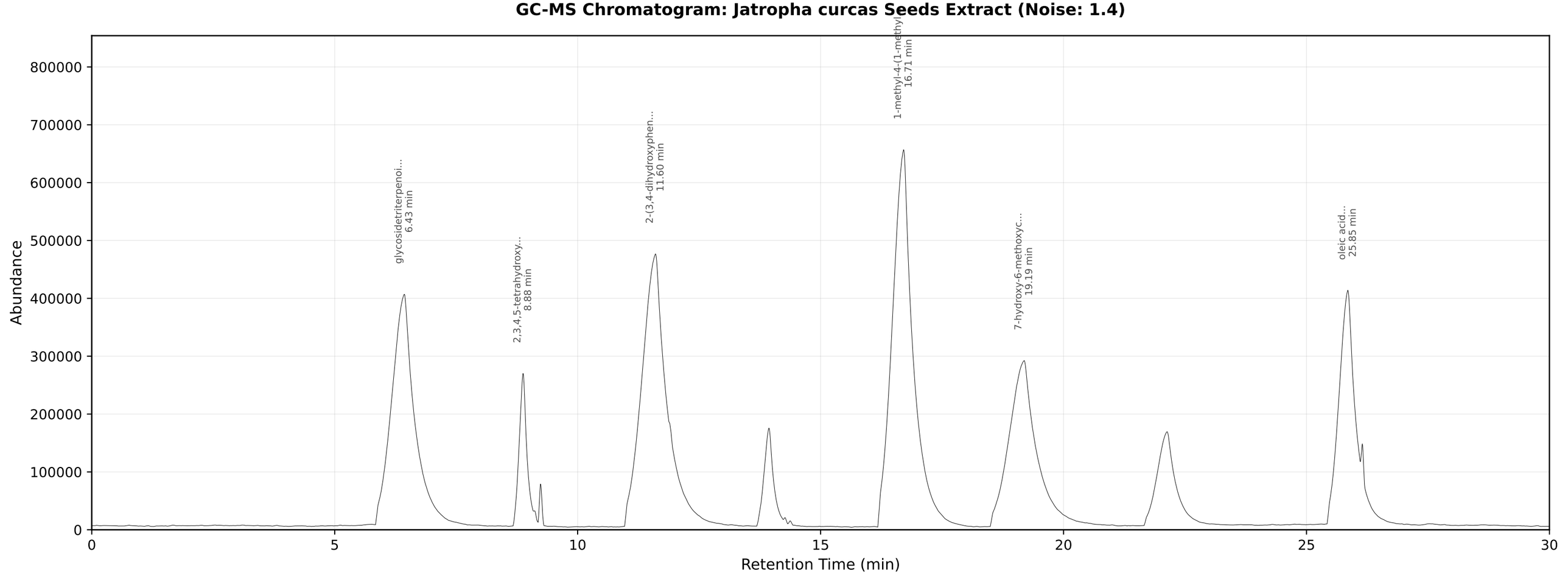
REALISTIC NOISE CHARACTERISTICS:
• Heavy baseline fluctuations: ±800 units
• Electronic noise: ±80 units with spikes
• Chemical background: 80-150 random peaks
• Ion source contamination: 15-30 events
• Detector artifacts and saturation effects
• Pump pulsations and flow irregularities
• Solvent impurity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


udsm lab 02025-0025: Phytochemicals Screening
1e6
1.0
0.8
0.6
0.4
0.2
0.0
Abundance
glycosidetriterpenoid...
6.43 min
2,3,4,5-tetrahydroxybenzo...
8.87 min
1-methyl-4-(1-methylethen...
16.71 min
oleic acid...
25.85 min
0
5
10
15
20
25
30
Retention Time (min)

udsm lab 02025-0025: Phytochemicals Screening




GC-MS Chromatogram: Jatropha curcas Stems Extract (Noise: 1.4)
1e6
Abundance
glycosidetriterpenoi...
6.44 min
2,3,4,5-tetrahydroxy...
8.87 min
1-methyl-4-(1-methyl...
16.71 min
oleic acid...
25.85 min
0.0
0.2
0.4
0.6
0.8
1.0
0
5
10
15
20
25
30


GC-MS Chromatogram: Jatropha curcas Seeds Extract (Noise: 1.4)
Abundance
glycosidetriterpenoi...
6.43 min
2,3,4,5-tetrahydroxy...
8.88 min
2-(3,4-dihydroxyphen...
11.60 min
1-methyl-4-(1-methyl...
16.71 min
7-hydroxy-6-methoxyc...
19.19 min
oleic acid...
25.85 min
0
100000
200000
300000
400000
500000
600000
700000
800000
0
5
10
15
20
25
30
Retention Time (min)

Compound Analysis Data Table

Compound	RT_min	Sample_A_Stems	Sample_B_Seeds	Base_Peak_mz	Compound_Class	Difference
glycosidetriterpenoid	6.45	7.84	7.69	457	Glycosides	-0.15
4,5-tetrahydroxybenzoi	8.89	4.56	5.47	333	Polyphenols	0.91
3,4-dihydroxyphenyl)-3,5	11.62	3.92	9.41	289	Polyphenols	5.49
tropane-lactone	13.95	2.87	3.11	300	Nitrogen Compounds	0.24
ethyl-4-(1-methylethenyl	16.73	17.45	12.98	411	Terpenes	-4.47
droxy-6-methoxychrome	19.21	1.92	5.63	179	Phenolic Compounds	3.71
palmitic acid	22.15	3.21	2.89	195	Acids	-0.32
oleic acid	25.87	5.67	8.34	284	Lipids	2.67