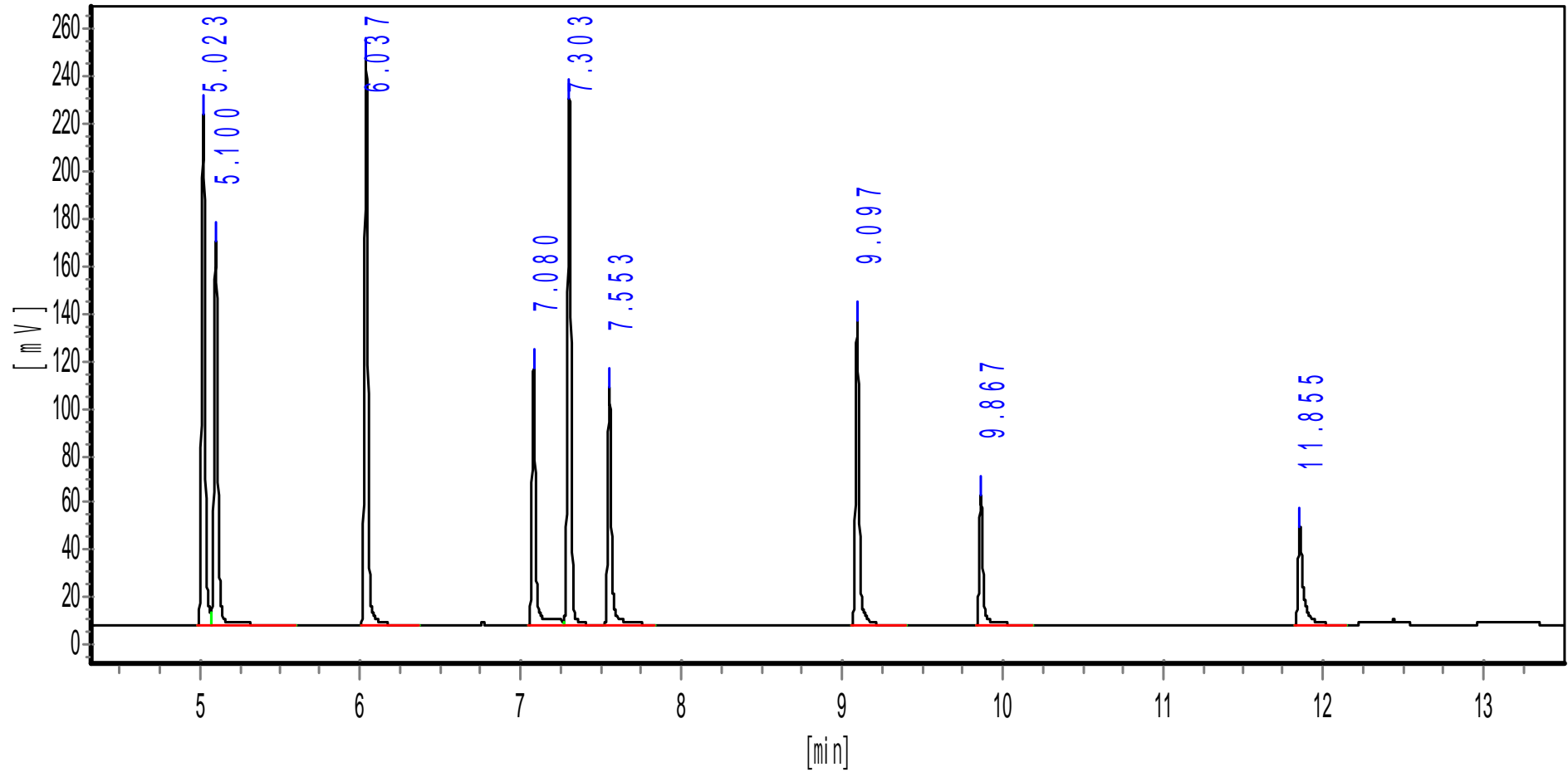


phenols Separation on GsBP-5MS column

Instrumentation Conditions

- GC: Agilent 5890A w/ FID
- Cat no: *1532-3002 30m x 0.32mm x 0.25um*
- Oven: 40°C 1min 12°C/min 220°C 30°C/min 300°C 1min
- Carrier: Hydrogen, 8psi
- Inlet: Split, 240 °C, split flow 50ml/min
- Detector: FID 260 °C
- Samples: phenol calibration mix
- Inject volume: 1ul

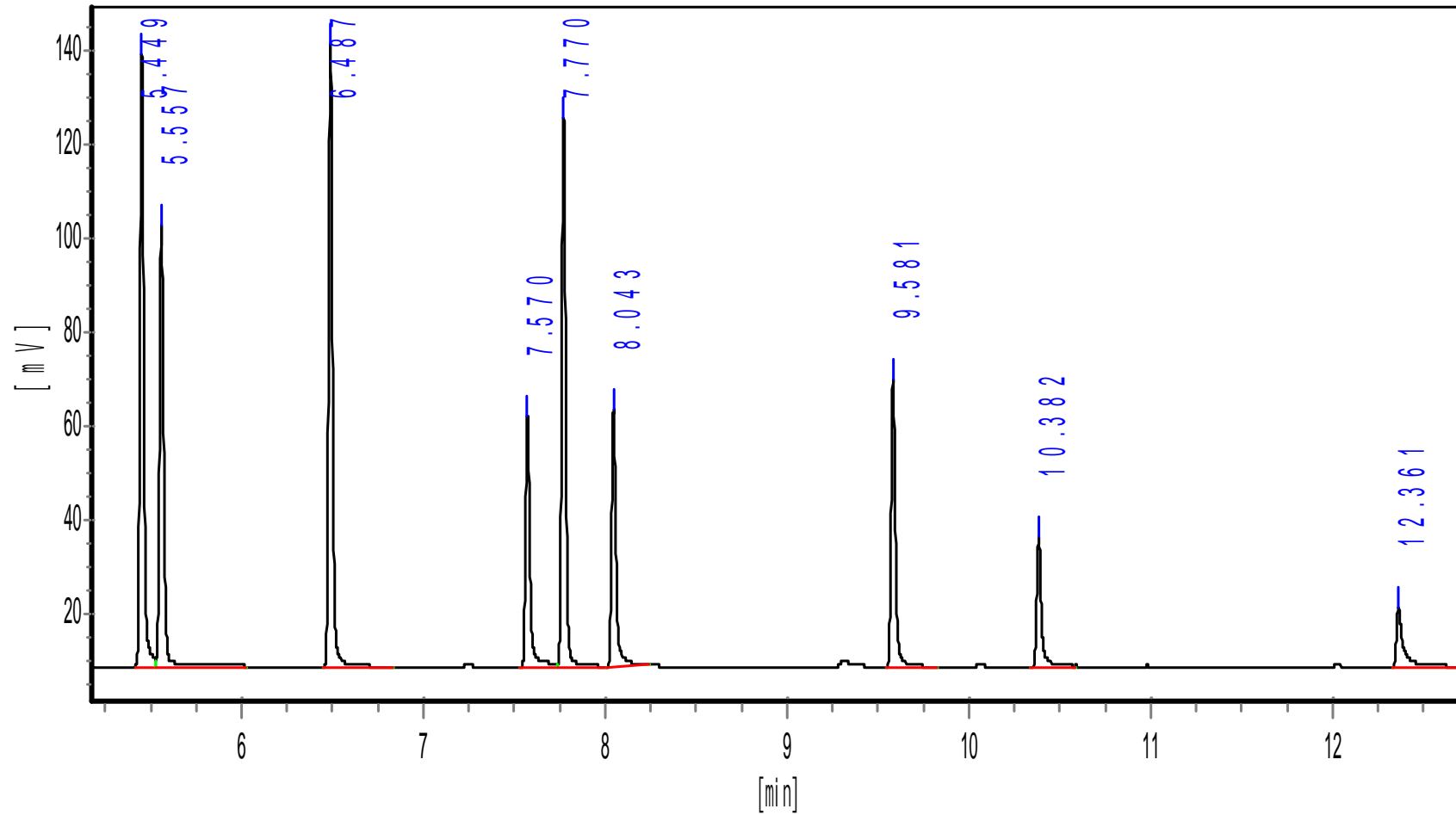
Chromatogram of untreated column



Peak Identifications and Resolutions:

Peak#	Compound	Retention Time	Symmetry
1	Phenol (108-95-2)	5.023	0.999
2	2-Chlorophenol (95-57-8)	5.1	1.292
3	2-Methylphenol (o-cresol) (95-48-7)	6.037	1.037
4	2-Nitrophenol (88-75-5)	7.08	1.387
5	2,4-Dimethylphenol (105-67-9)	7.303	0.914
6	2,4-Dichlorophenol (120-83-2)	7.553	1.256
7	4-Chloro-3-methylphenol (59-50-7)	9.097	1.169
8	2,4,6-Trichlorophenol (88-06-2)	9.867	1.493
9	2,3,4,5-Tetrachlorophenol (4901-51-3), 2,000 µg/mL	11.855	2.24

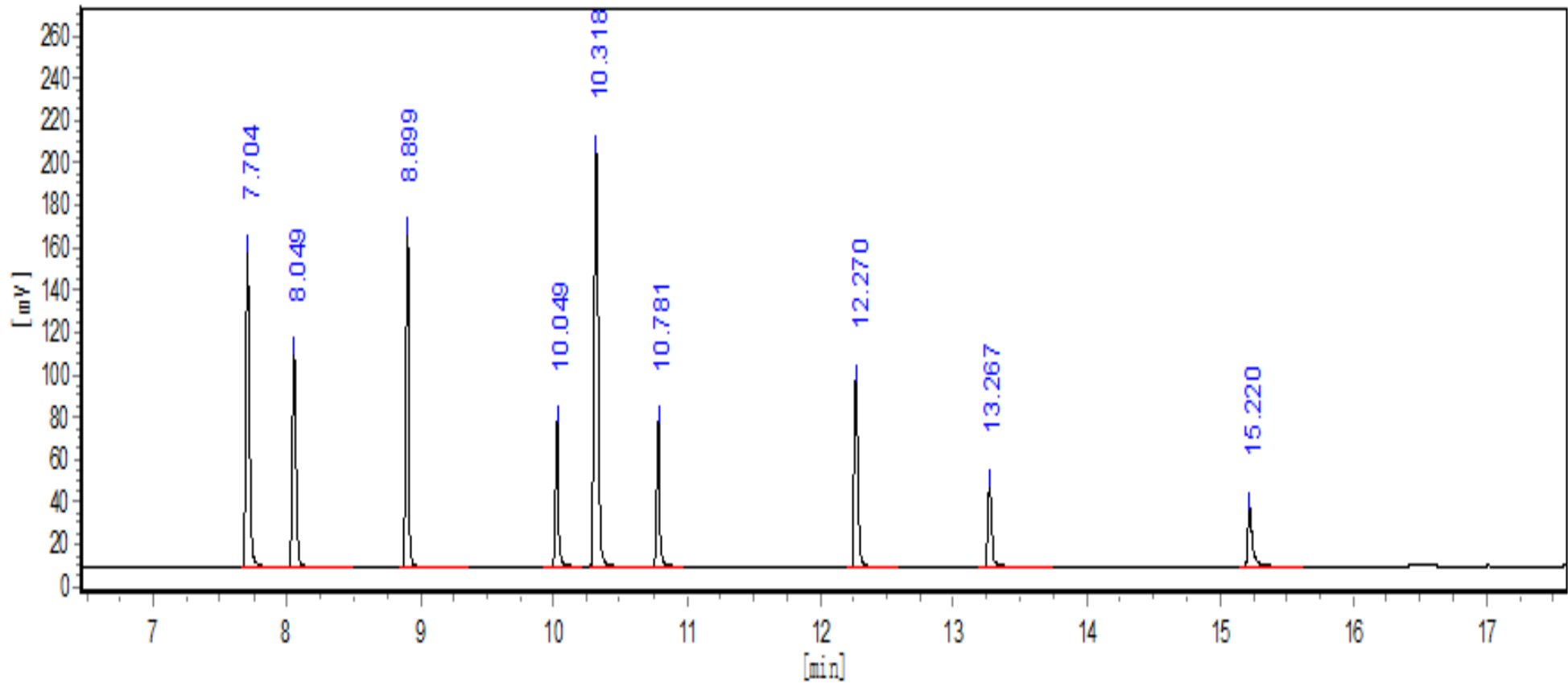
Chromatogram of column after IPA/Toluene treatment:



Peak Identifications and Resolutions:

Peak#	Compound	Retention Time	Symmetry
1	Phenol (108-95-2)	5.449	1.075
2	2-Chlorophenol (95-57-8)	5.557	1.176
3	2-Methylphenol (o-cresol) (95-48-7)	6.487	1.077
4	2-Nitrophenol (88-75-5)	7.57	1.424
5	2,4-Dimethylphenol (105-67-9)	7.77	1.005
6	2,4-Dichlorophenol (120-83-2)	8.043	1.314
7	4-Chloro-3-methylphenol (59-50-7)	9.581	1.266
8	2,4,6-Trichlorophenol (88-06-2)	10.382	1.366
9	2,3,4,5-Tetrachlorophenol (4901-51-3), 2,000 µg/mL	12.361	2.689

Chromatogram of column with acid pre-treatment:



Peak Identifications and Resolutions:

Peak#	Compound	Retention Time	Symmetry
1	Phenol (108-95-2)	7.704	1.298
2	2-Chlorophenol (95-57-8)	8.049	1.202
3	2-Methylphenol (o-cresol) (95-48-7)	8.899	1.156
4	2-Nitrophenol (88-75-5)	10.049	1.281
5	2,4-Dimethylphenol (105-67-9)	10.318	1.151
6	2,4-Dichlorophenol (120-83-2)	10.781	1.295
7	4-Chloro-3-methylphenol (59-50-7)	12.27	1.182
8	2,4,6-Trichlorophenol (88-06-2)	13.267	1.676
9	2,3,4,5-Tetrachlorophenol (4901-51-3), 2,000 µg/mL	15.22	2.104