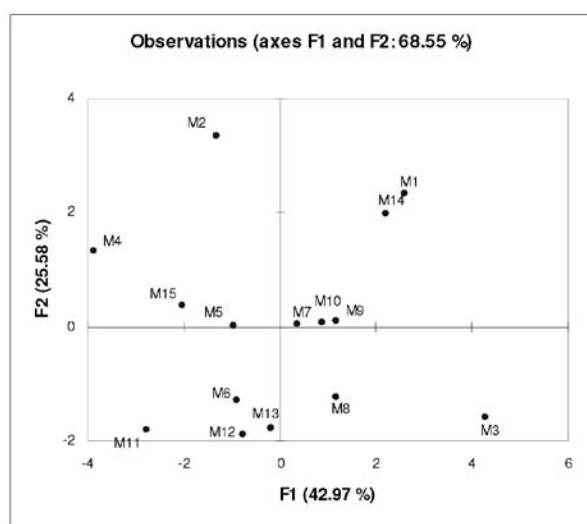


## Average Mass Scan of the Total Ion Chromatogram versus Percentage Chemical Composition in Multivariate Statistical Comparison of Complex Volatile Mixtures

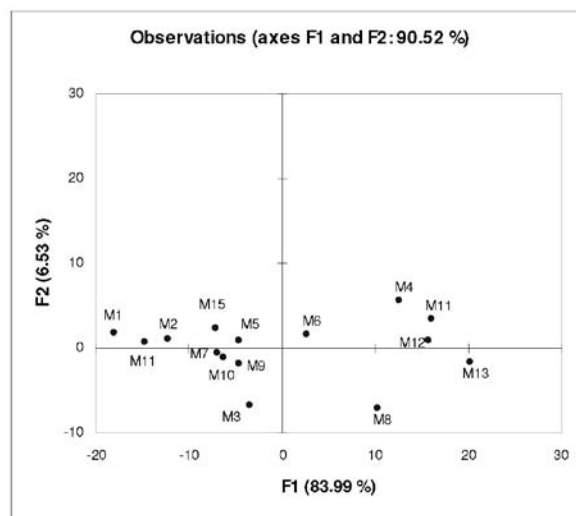
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<sup>a</sup>Department of Chemistry, Faculty of Science and Mathematics, University of Niš, Višegradska 33,  
18000 Niš, Serbia

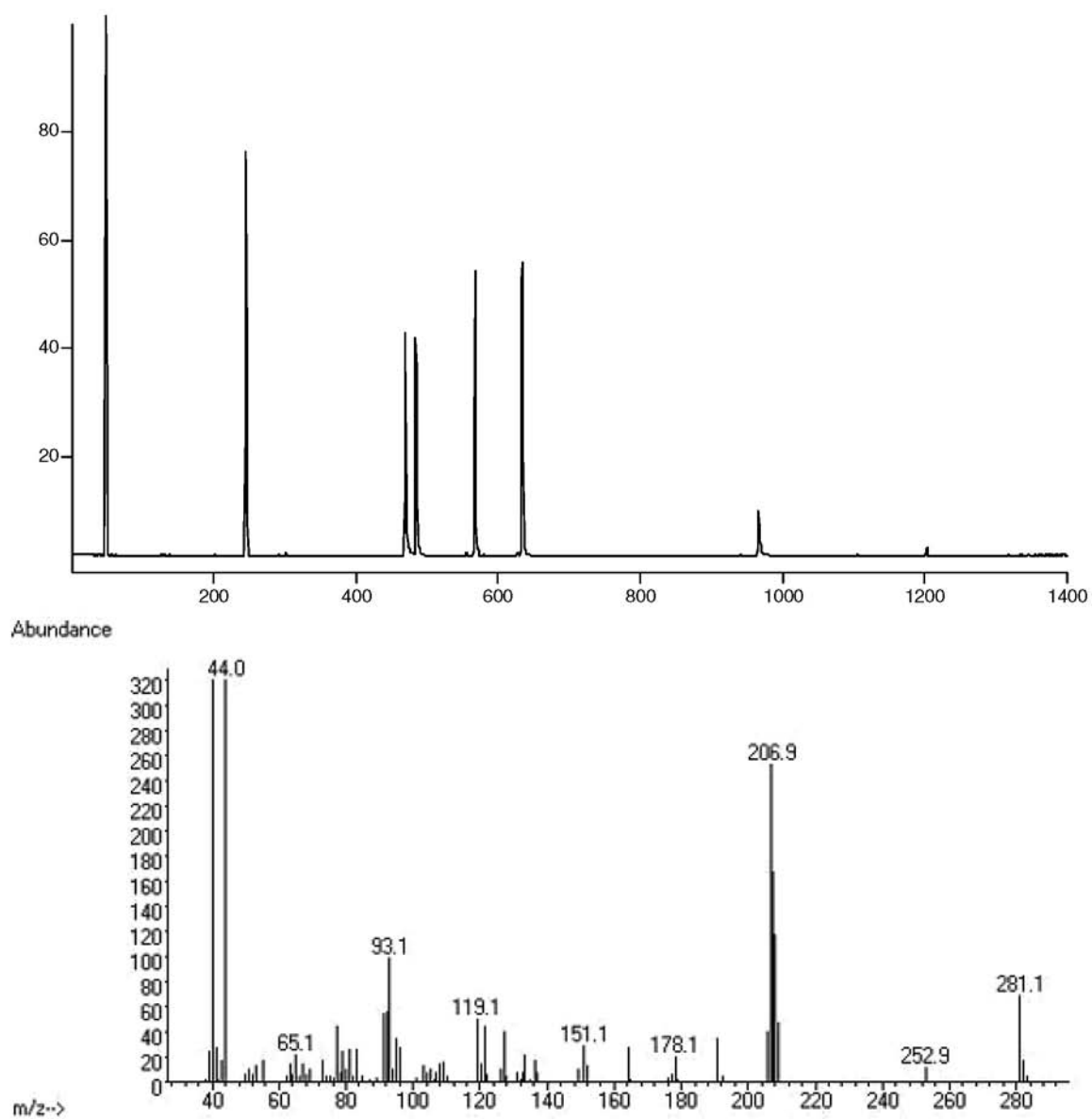
<sup>b</sup>School of Chemistry, University of Wollongong, Wollongong NSW 2522, Australia



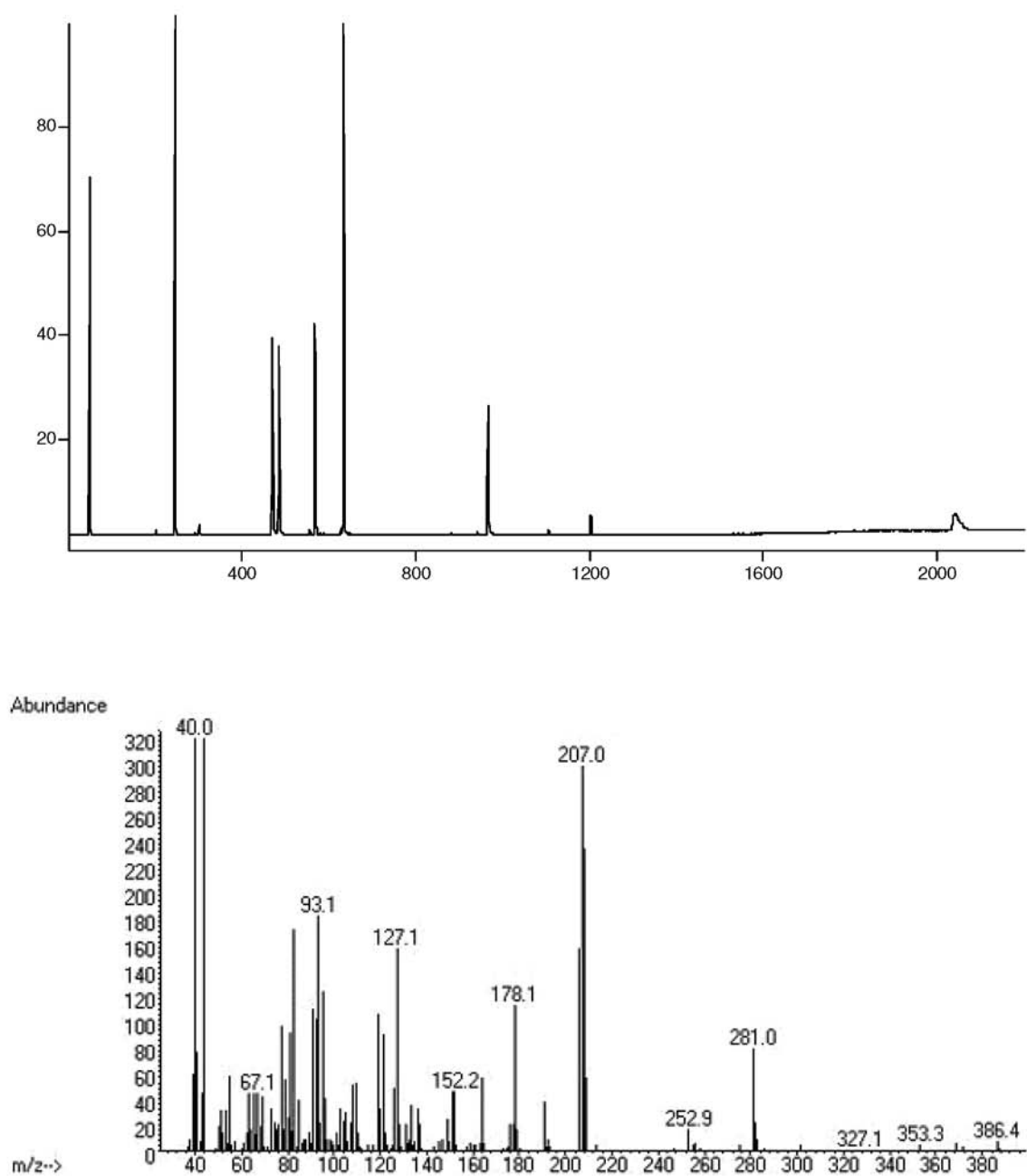
**Figure S1.** Principal component analysis (the original variables) ordination of 15 model complex mixtures (observations). Axes (F1 and F2 factors-the first and second principal component) refer to the ordination scores obtained from the samples. Axis F1 accounts for ca. 42% and axis F2 accounts for a further 26% of the total variance.



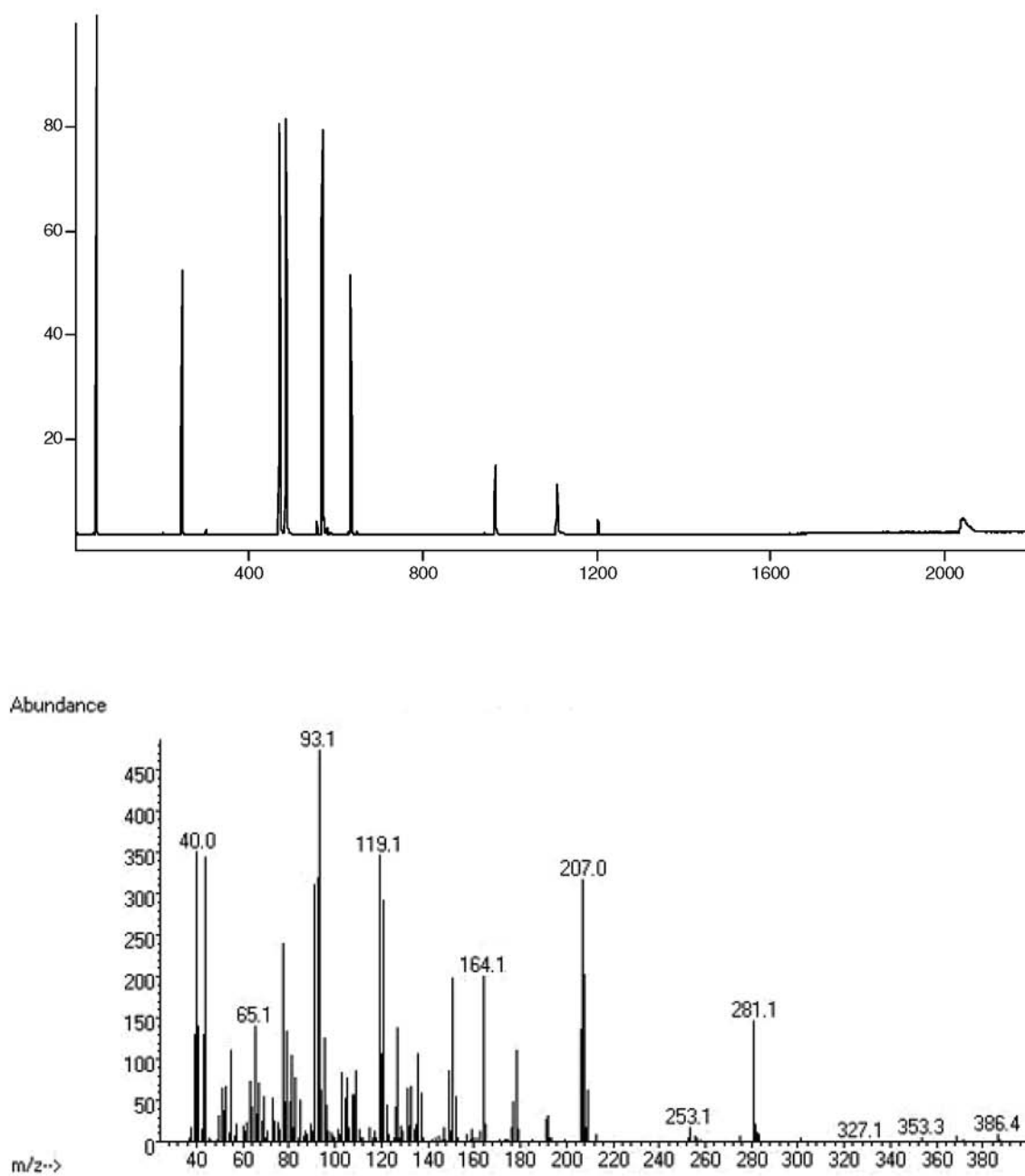
**Figure S2.** Principal component analysis (AMS relative abundances of  $m/z$  values as variables) ordination of 15 model complex mixtures (observations). Axes (F1 and F2 factors-the first and second principal component) refer to the ordination scores obtained from the samples. Axis F1 accounts for ca. 84% and axis F2 accounts for a further 7% of the total variance.



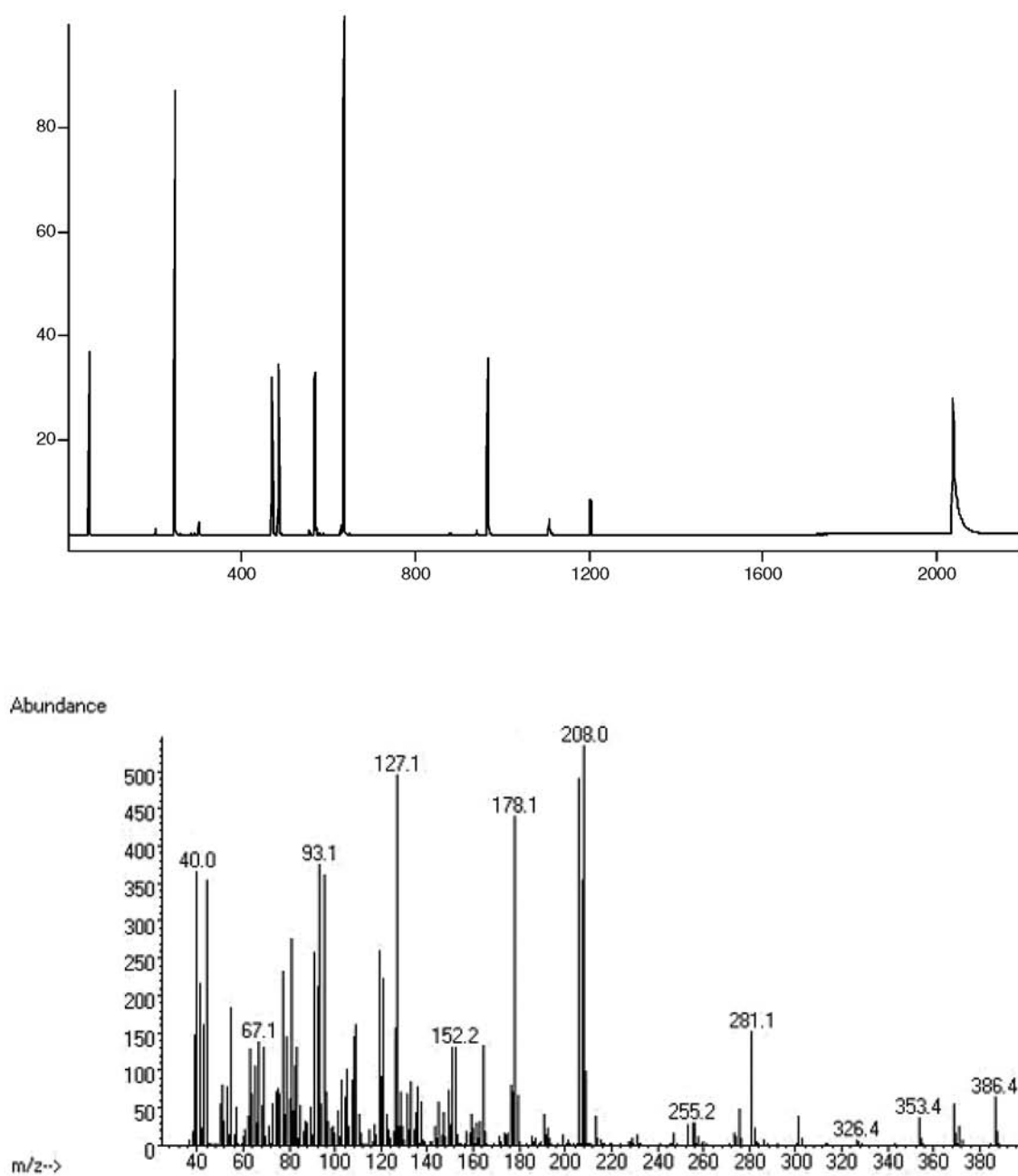
**Figure S3.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M1.



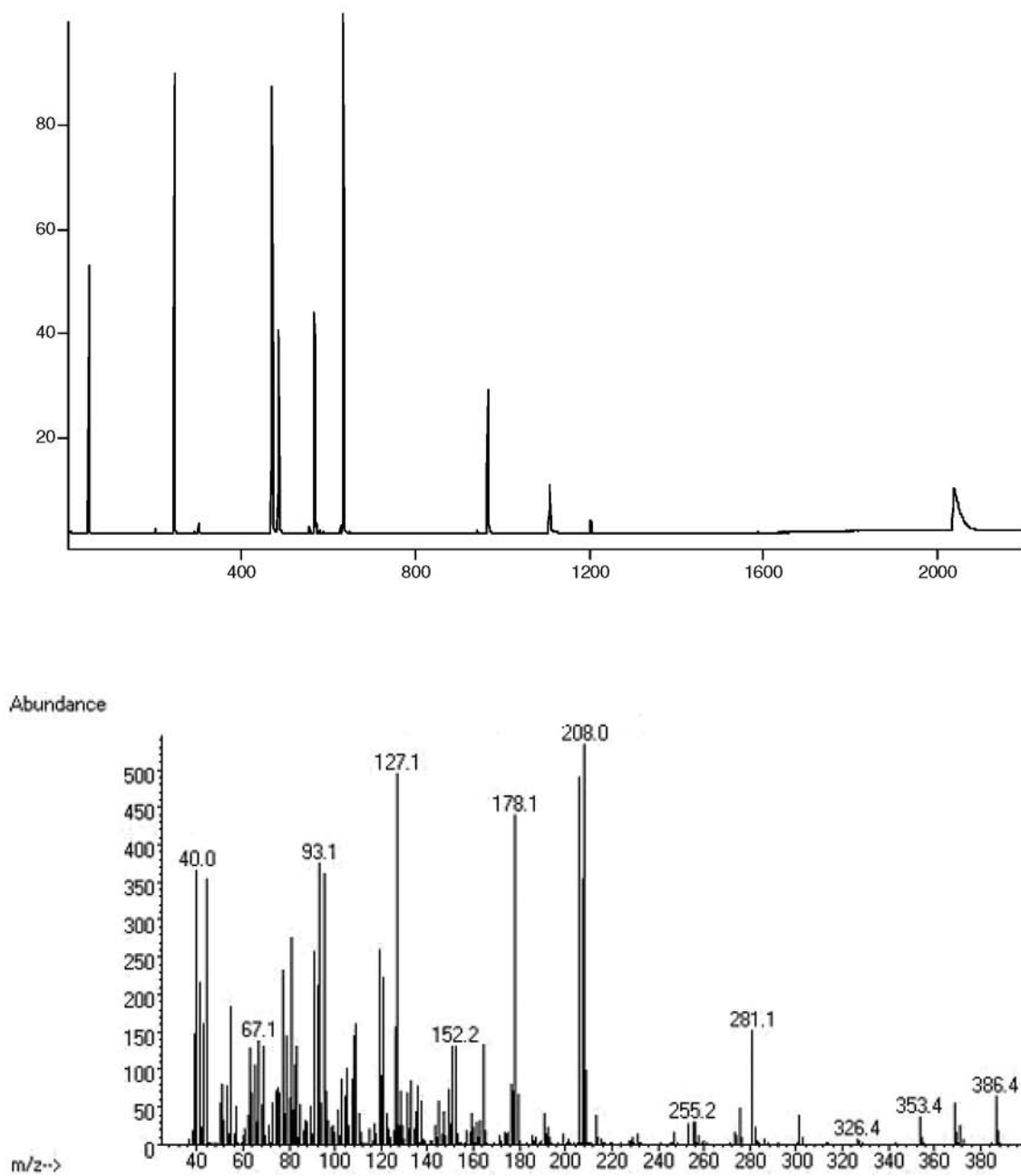
**Figure S4.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M2.



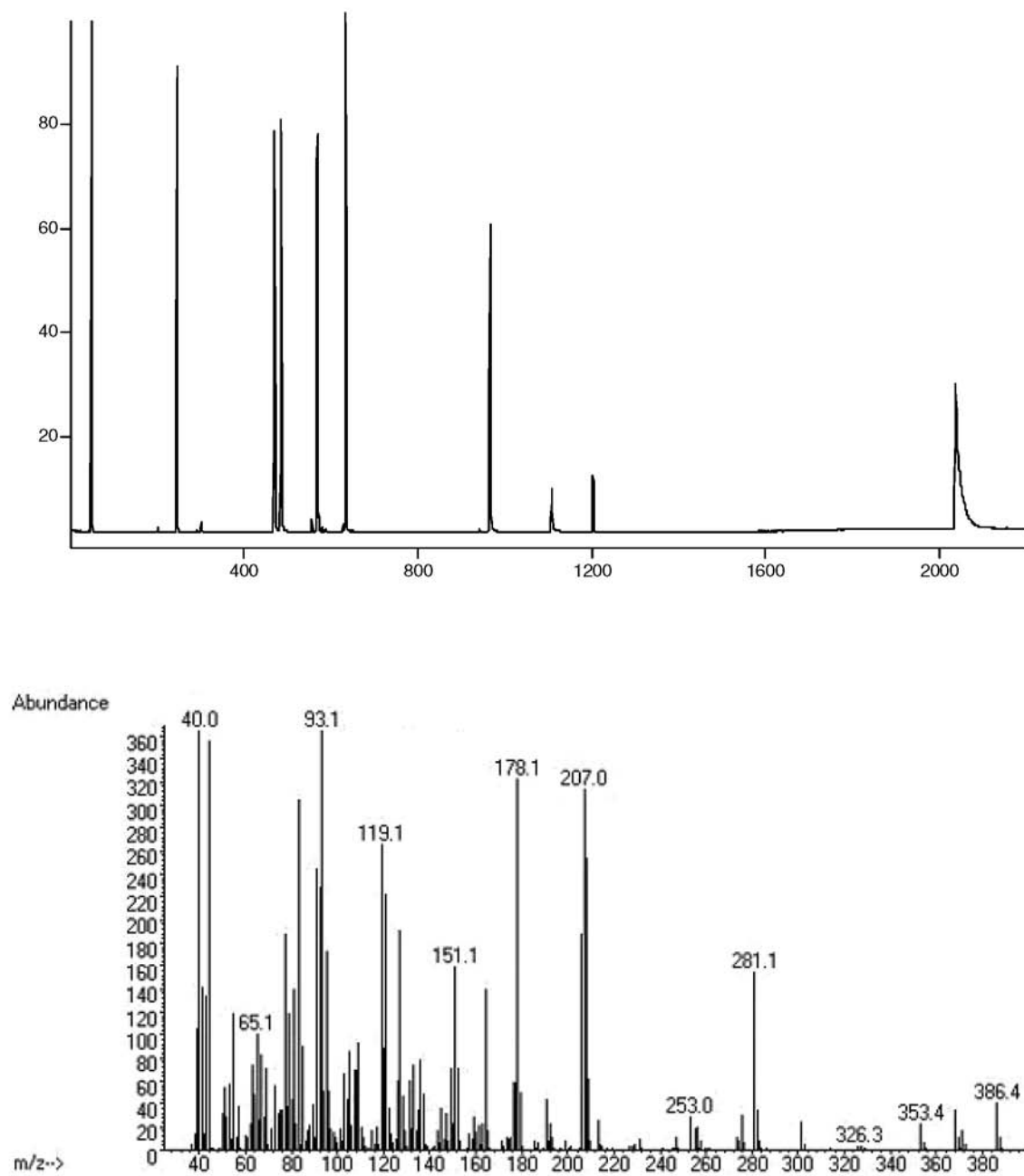
**Figure S5.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M3.



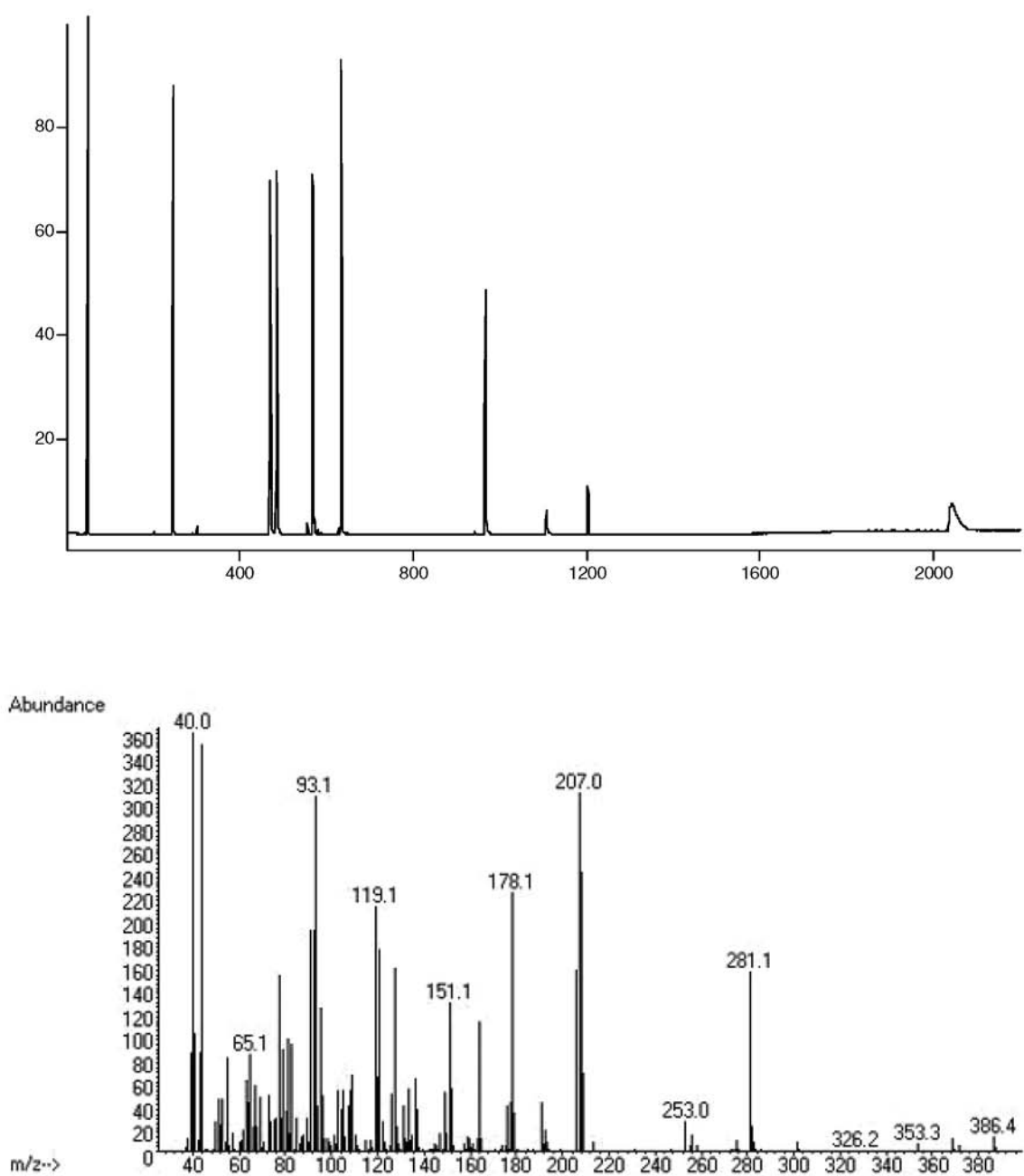
**Figure S6.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M4.



**Figure S7.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M5.

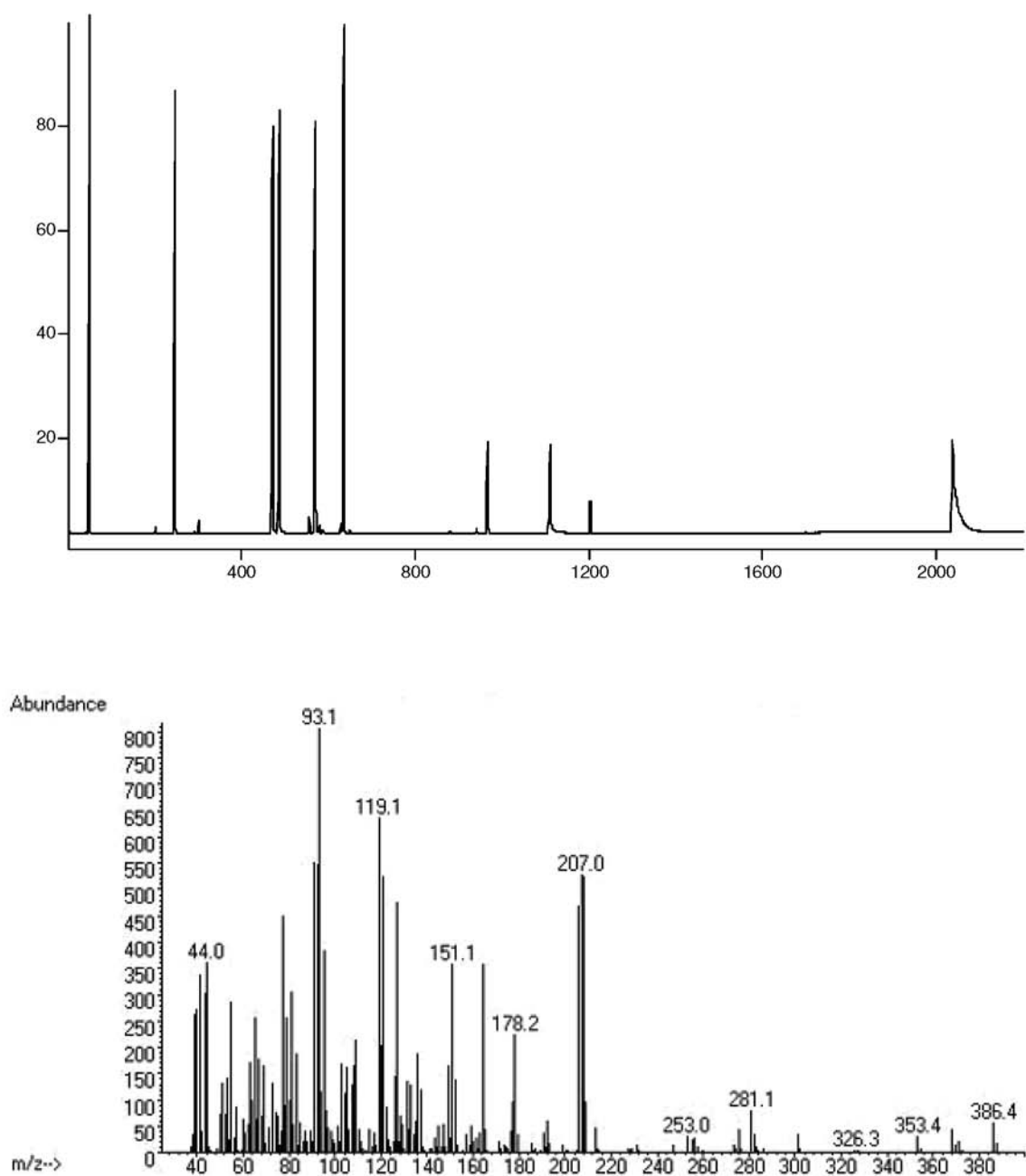


**Figure S8.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M6.

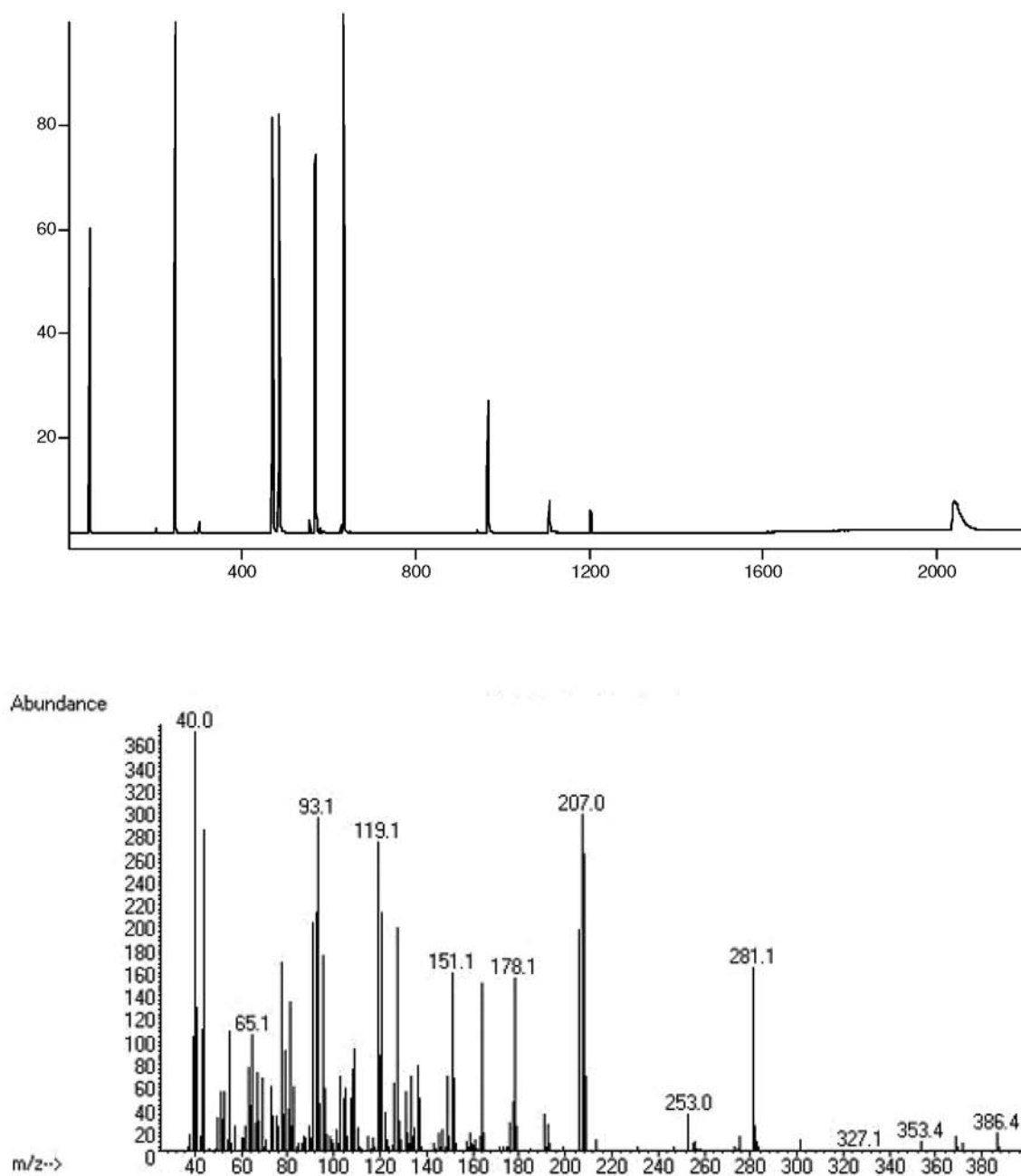


**Figure S9.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M7.

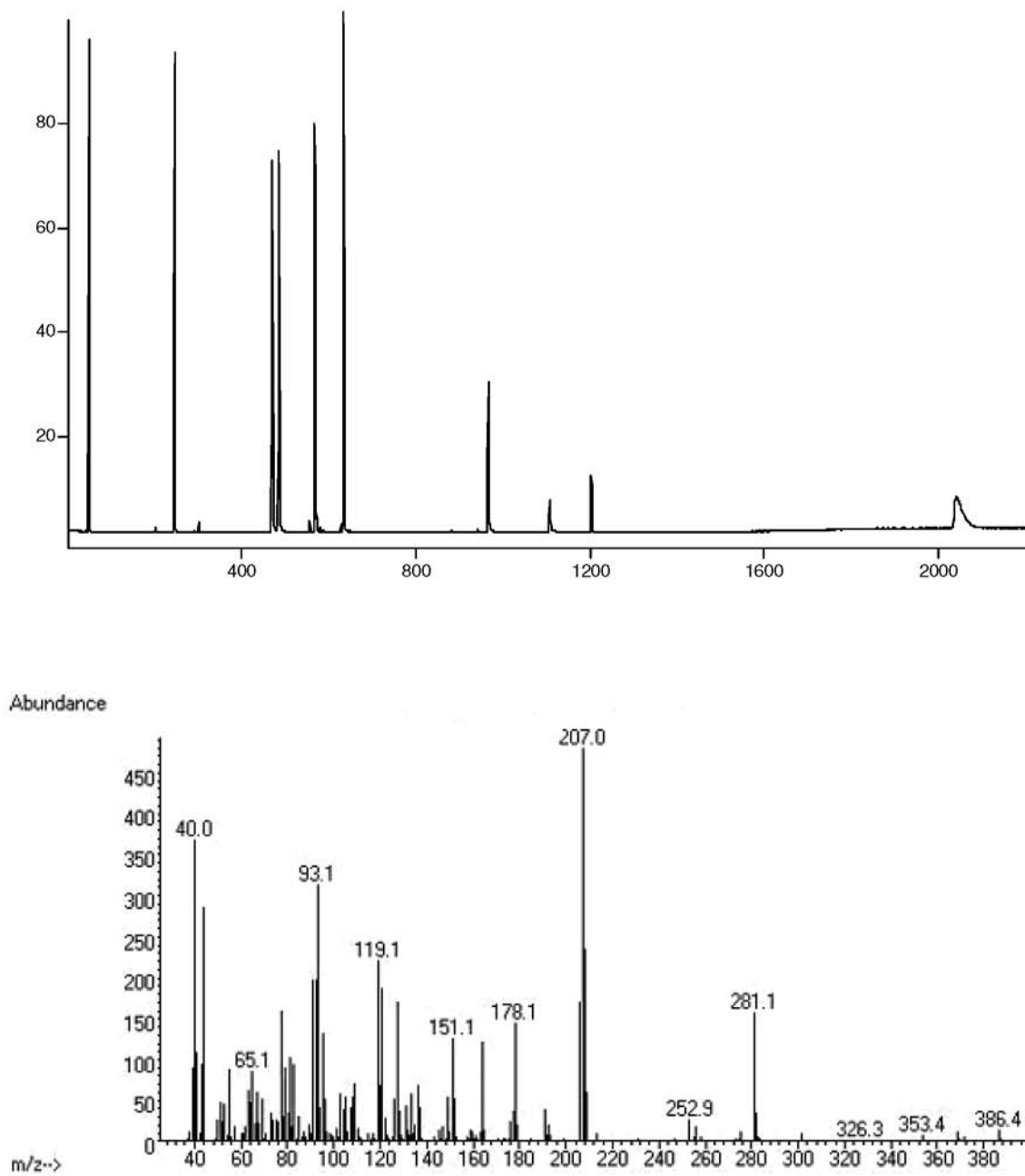




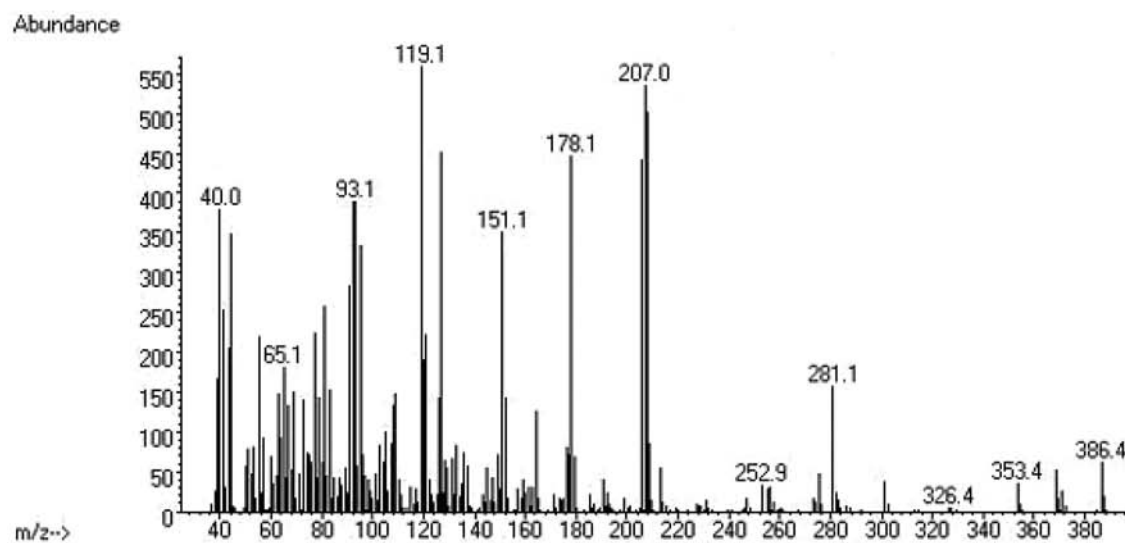
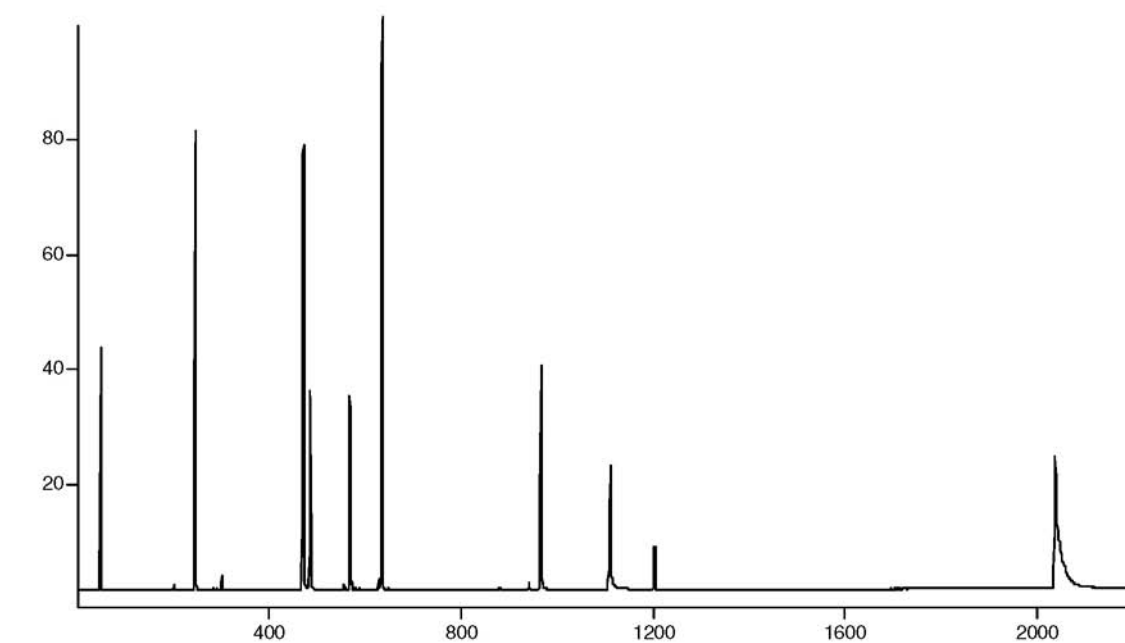
**Figure S10.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M8.



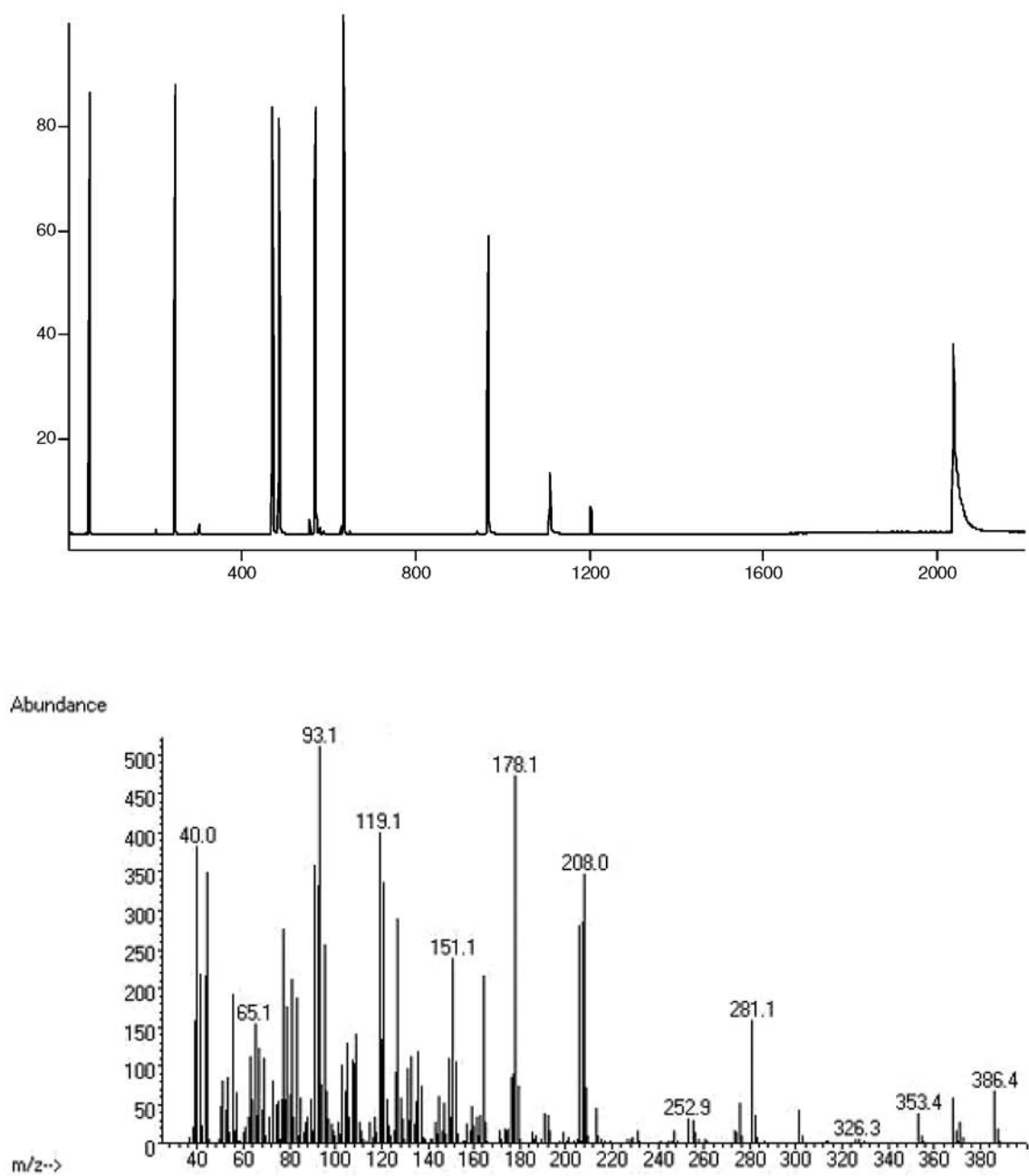
**Figure S11.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M9.



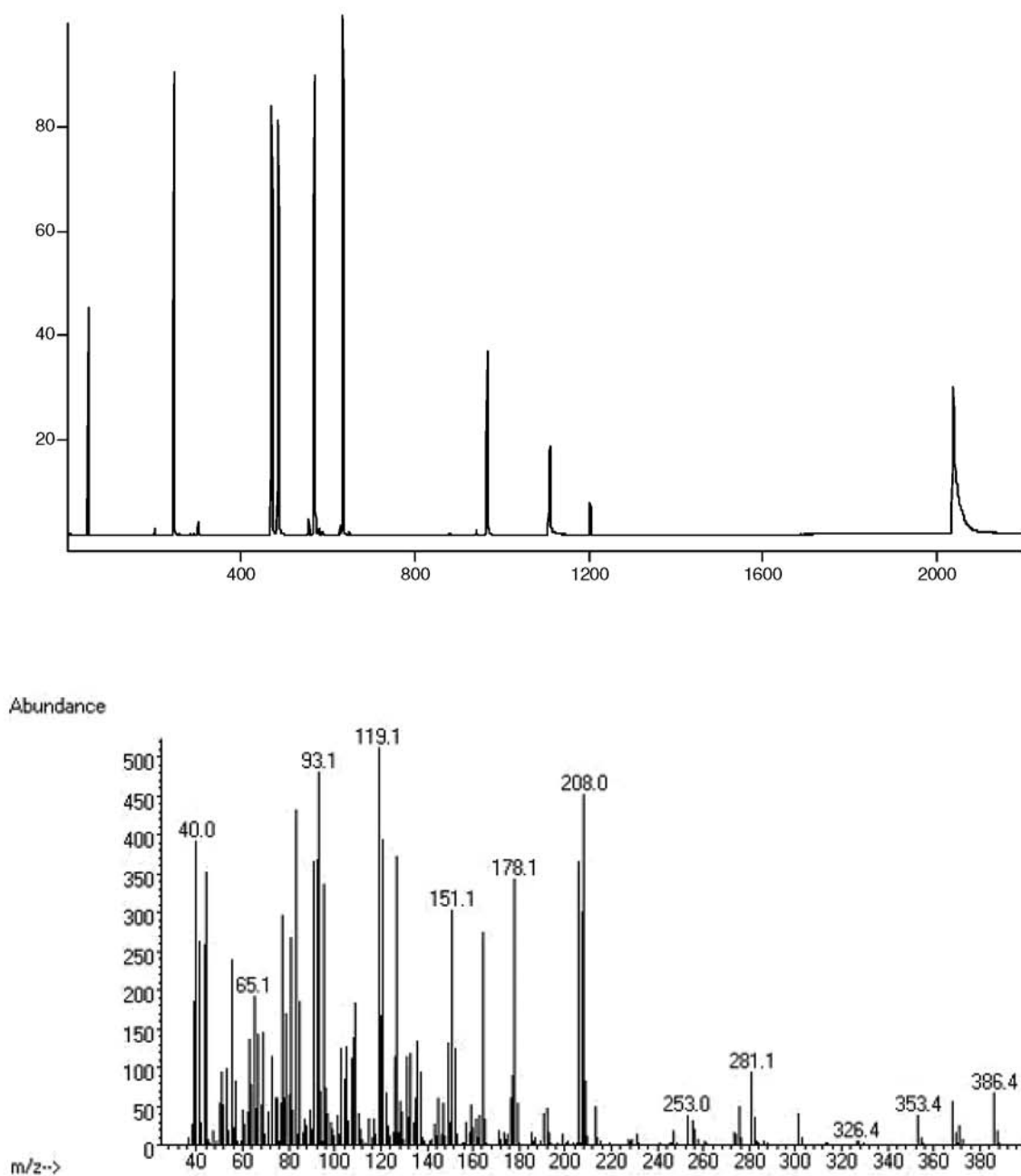
**Figure S12.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M10.



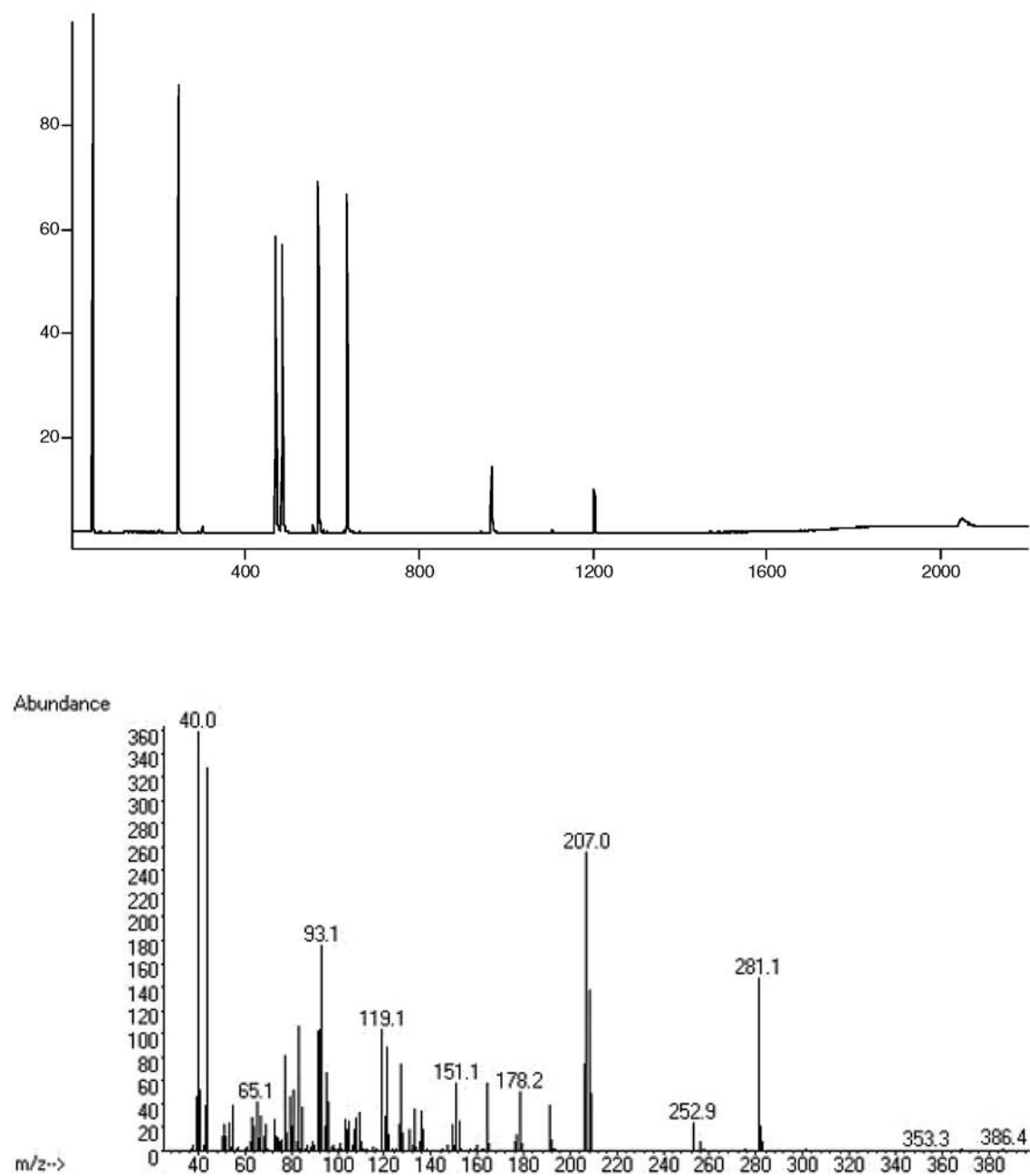
**Figure S13.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M11.



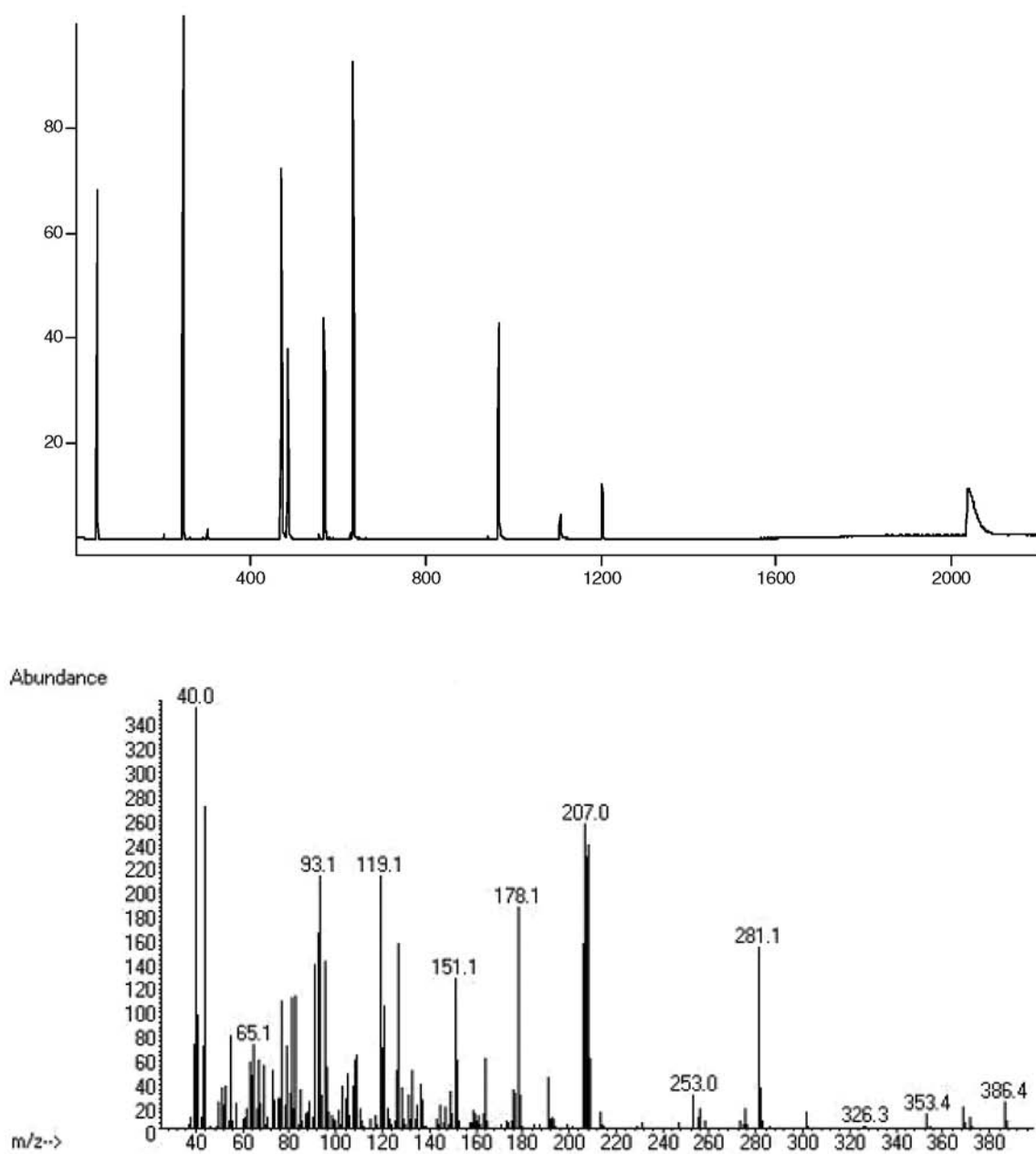
**Figure S14.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M12.



**Figure S15.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M13.



**Figure S16.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M14.



**Figure S17.** GC-MS (TIC) chromatogram (abscissa: scan number, ordinate: relative response of MS detector) and AMS profile (abscissa:  $m/z$  value, ordinate: response of MS detector) of model complex mixture M15.