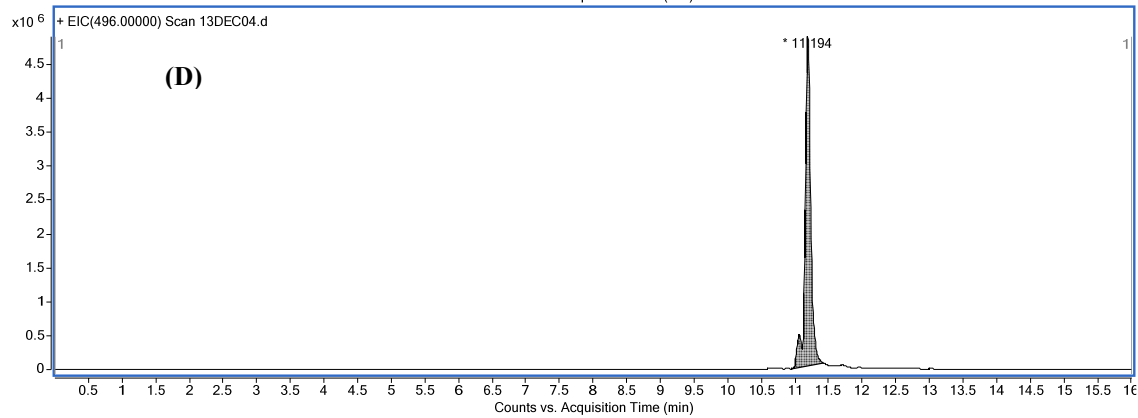
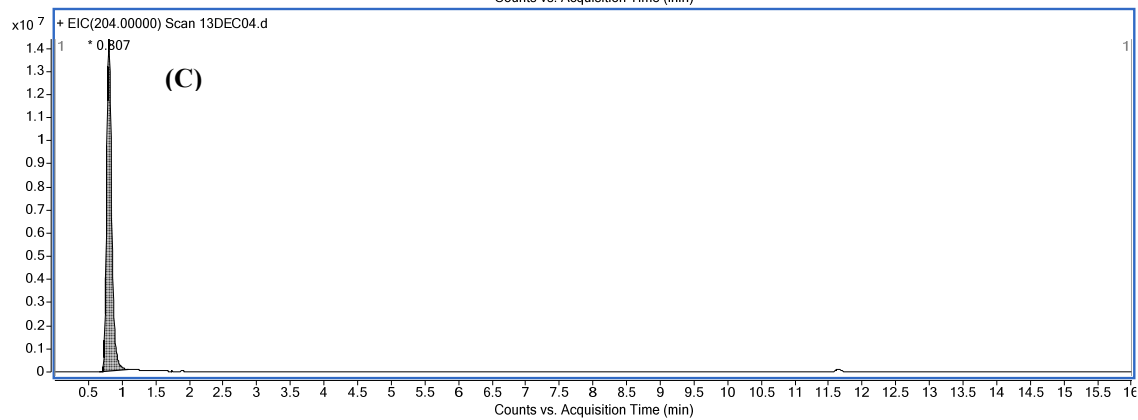
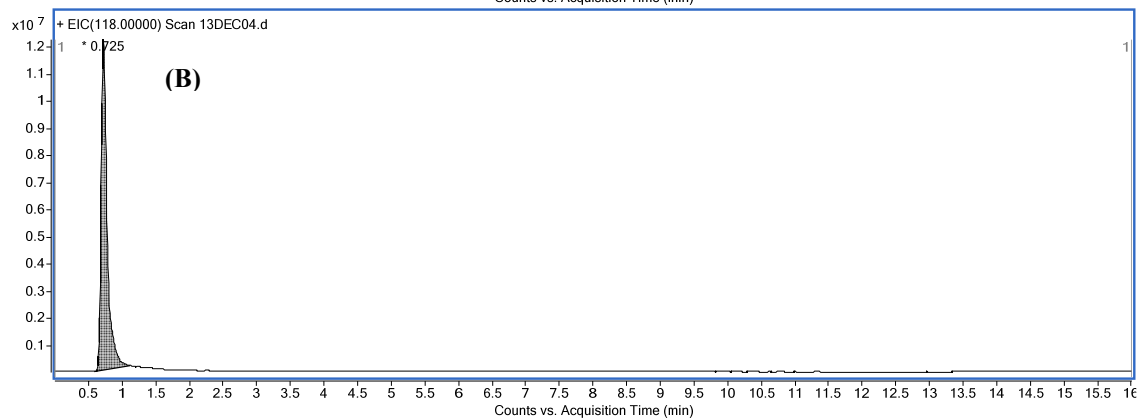
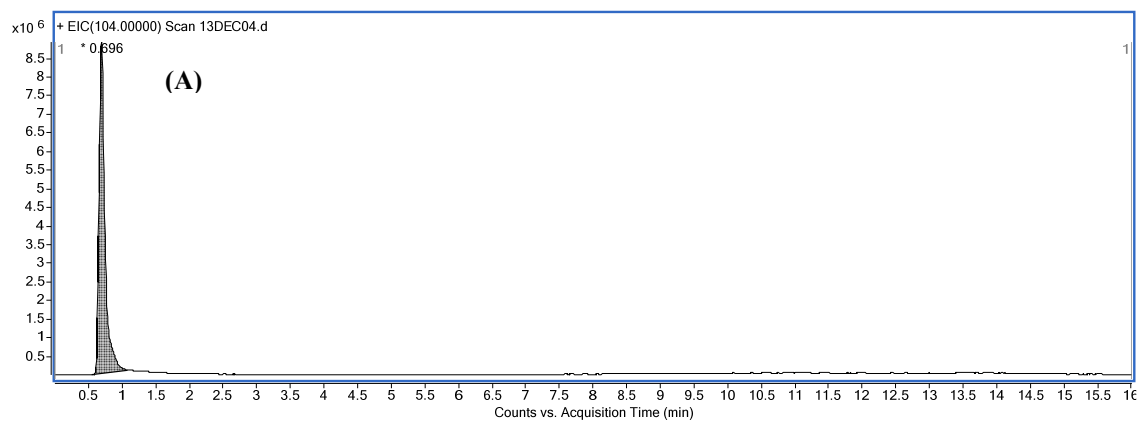




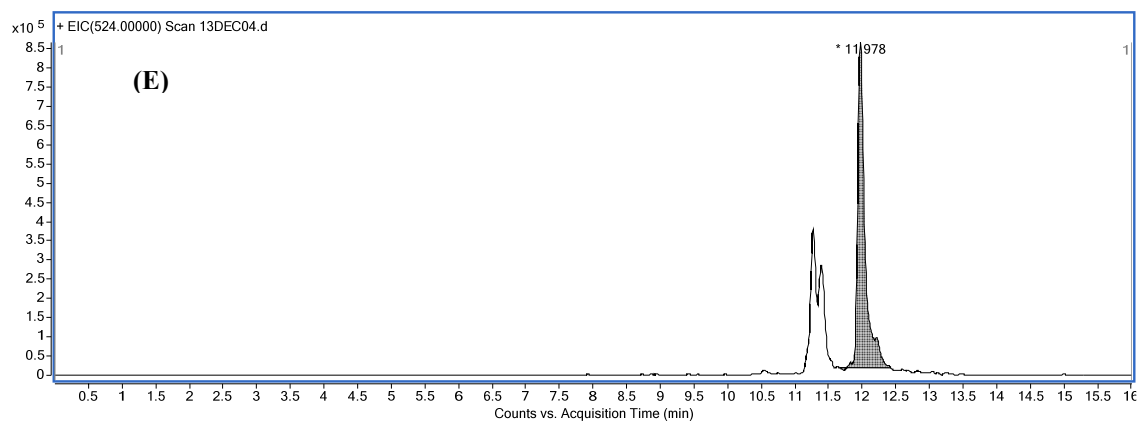
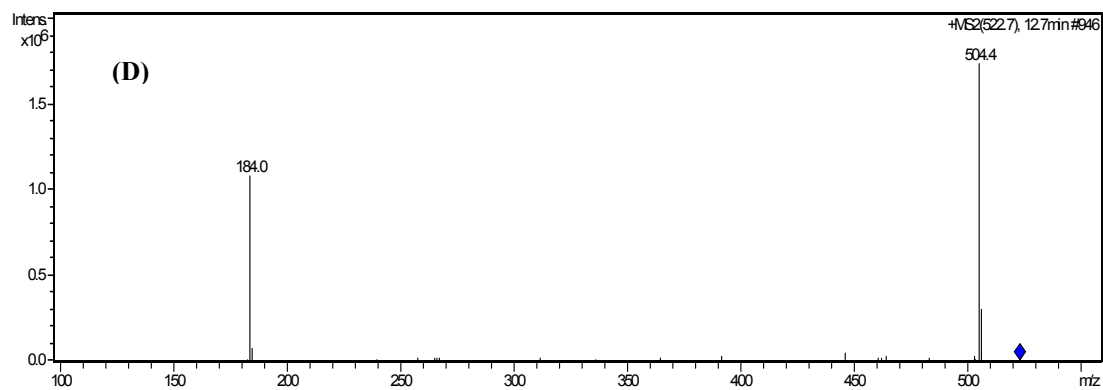
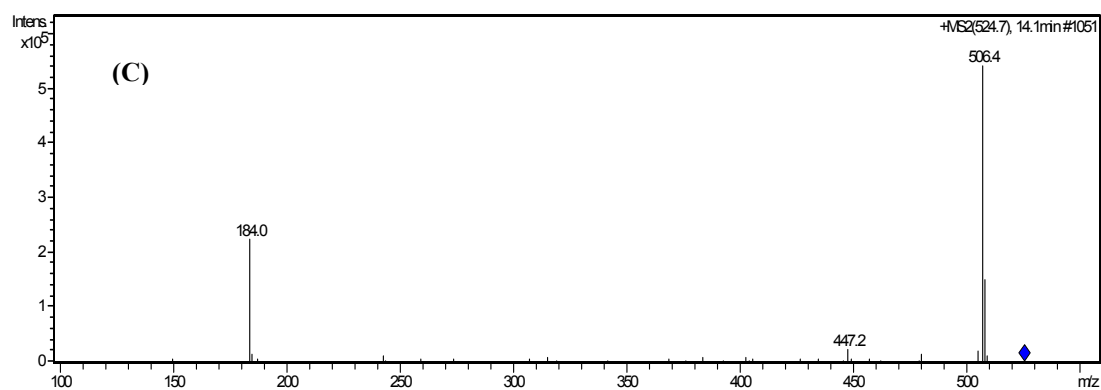
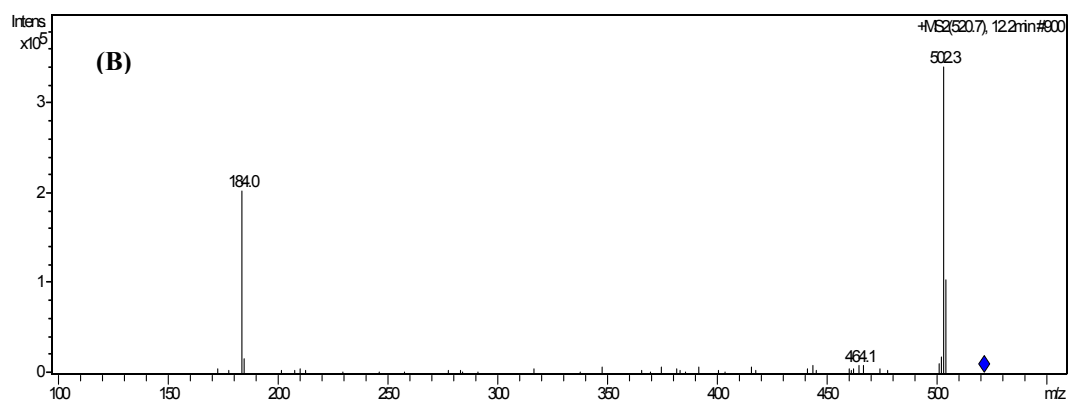
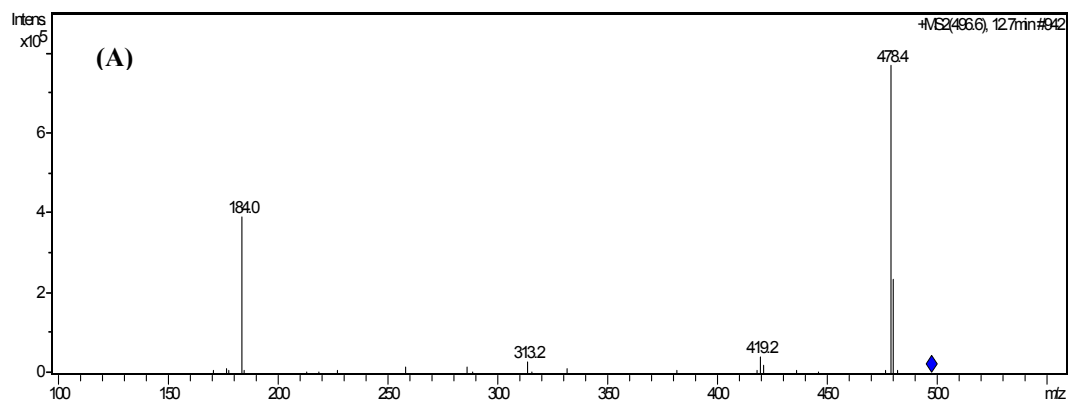


Figure S1. Extracted ion chromatograms of A) choline, B) betaine, C) acetylcarnitine
D) LPC C16:0, E) LPC C18:0.



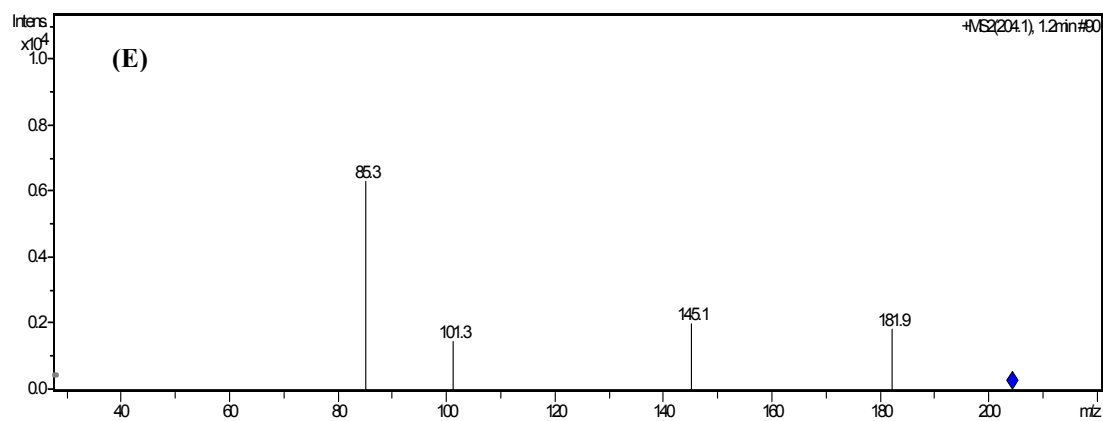
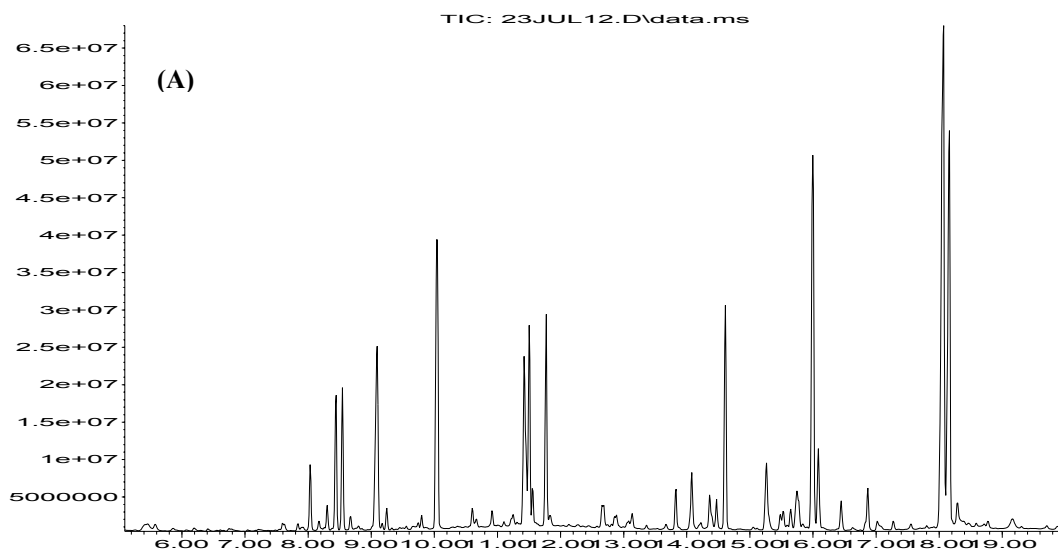
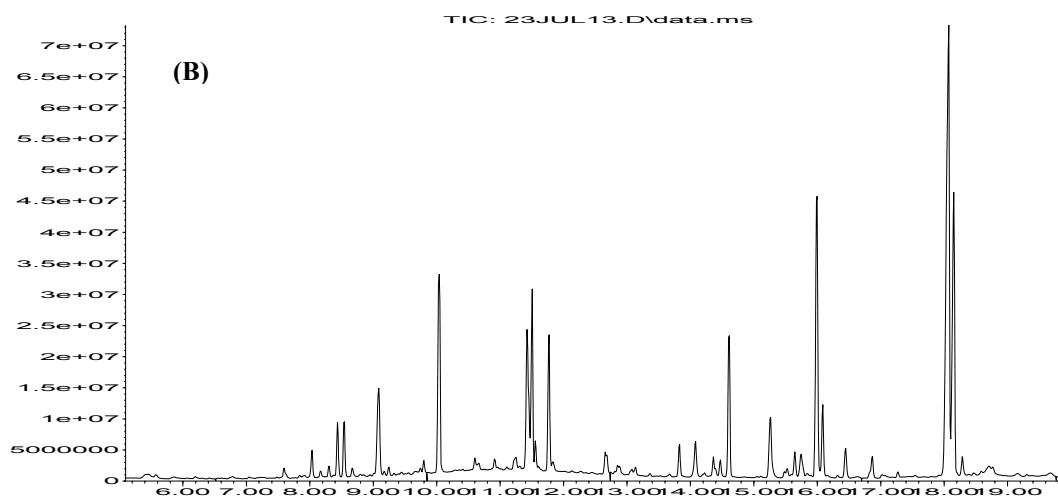


Figure S2. LC/MSMS spectra of A) LPC C16:0, B) LPC C18:2, C) LPC C18:0, D) LPC C18:1 and E) acetylcarnitine.

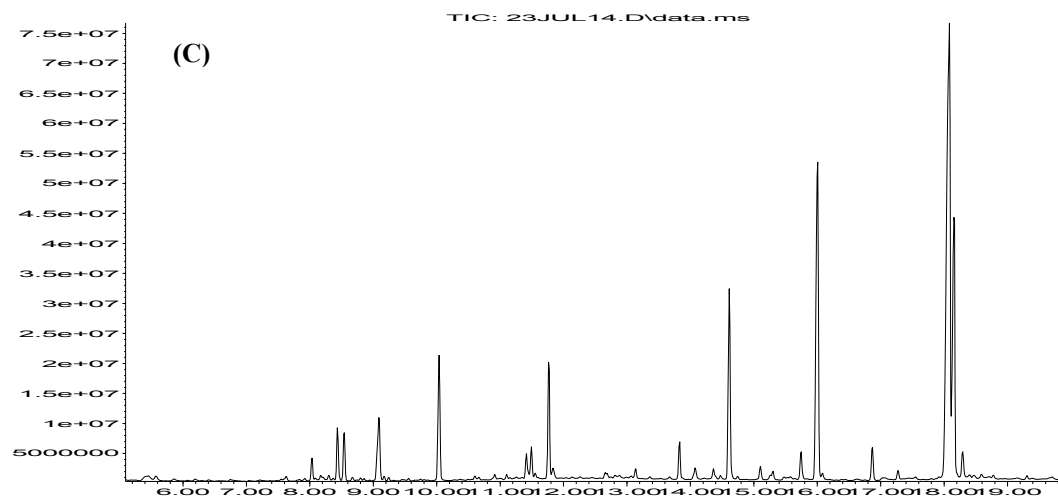
Abundance



Time-->
Abundance



Time-->
Abundance



Time-->

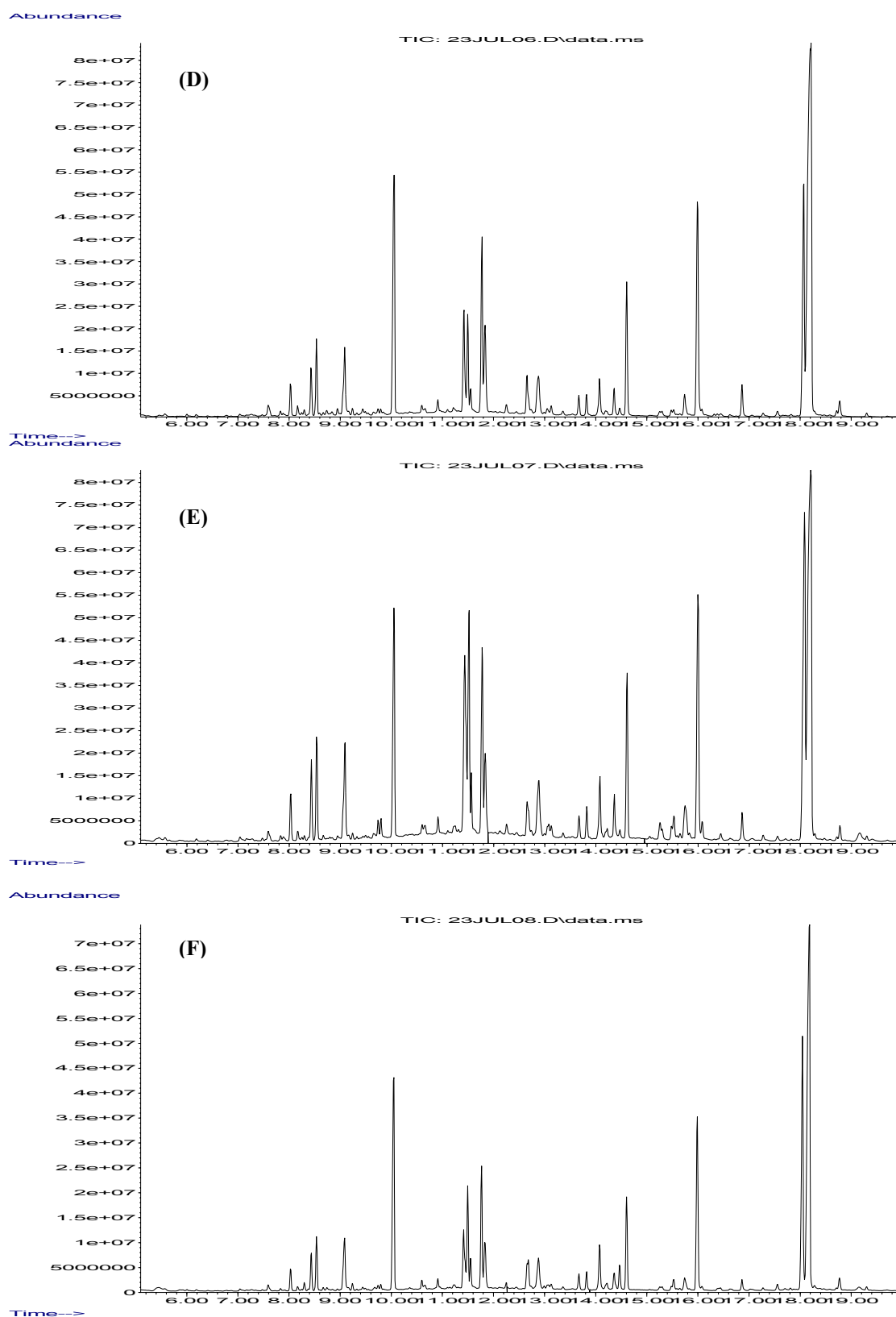
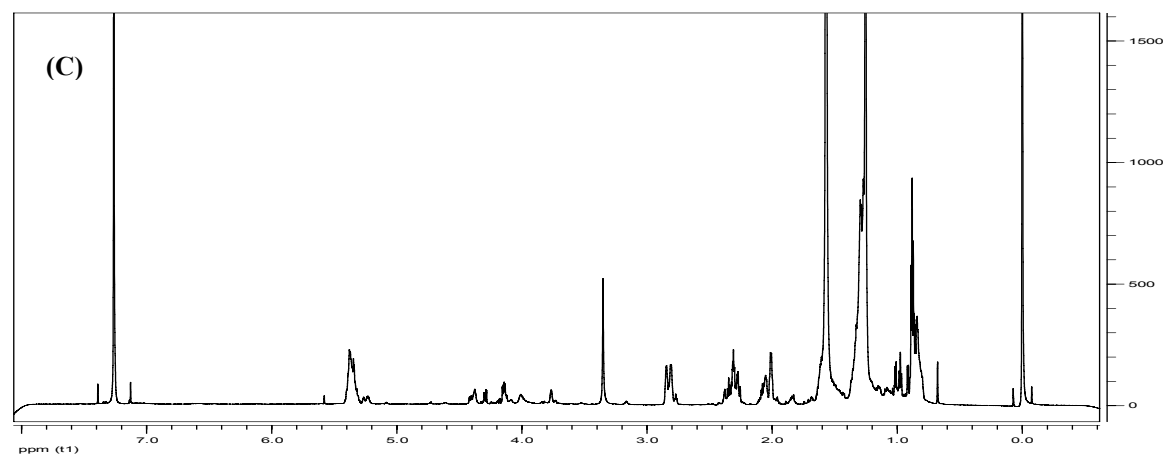
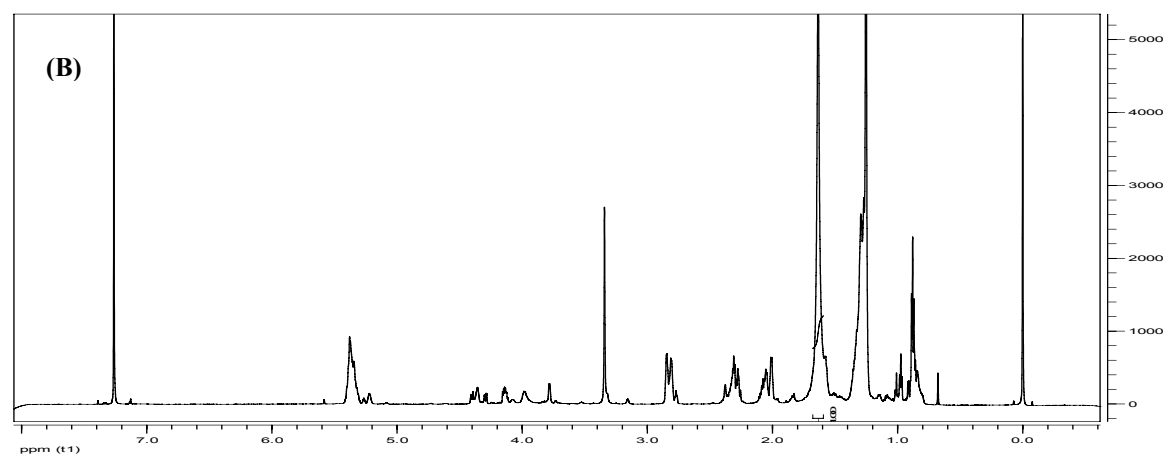
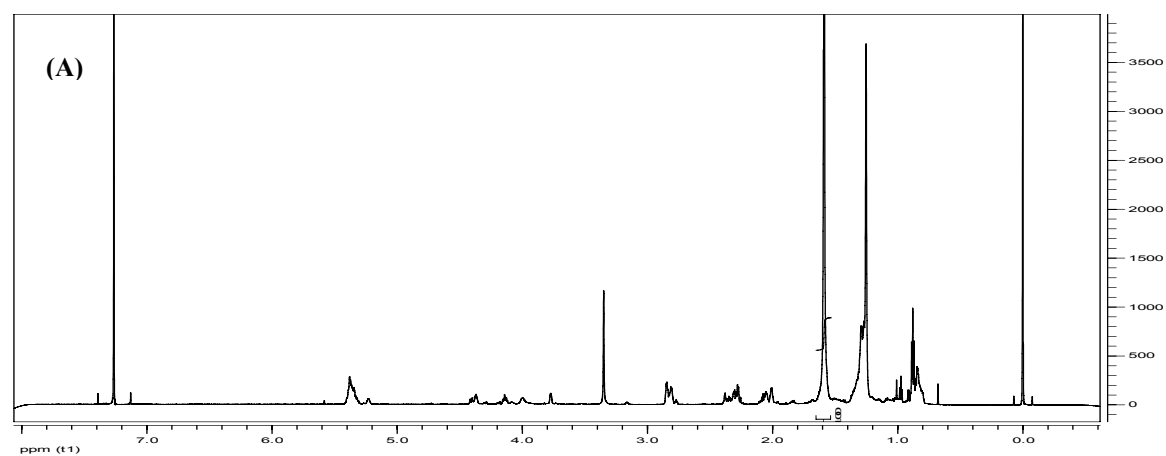


Figure S3. Total ion chromatogram (TIC) from the analysis of derivatized lipid extract from (A-C) male zebrafish liver extract and (D-F) female zebrafish liver extract using GC/MS. The identified peaks are listed in Table 1.



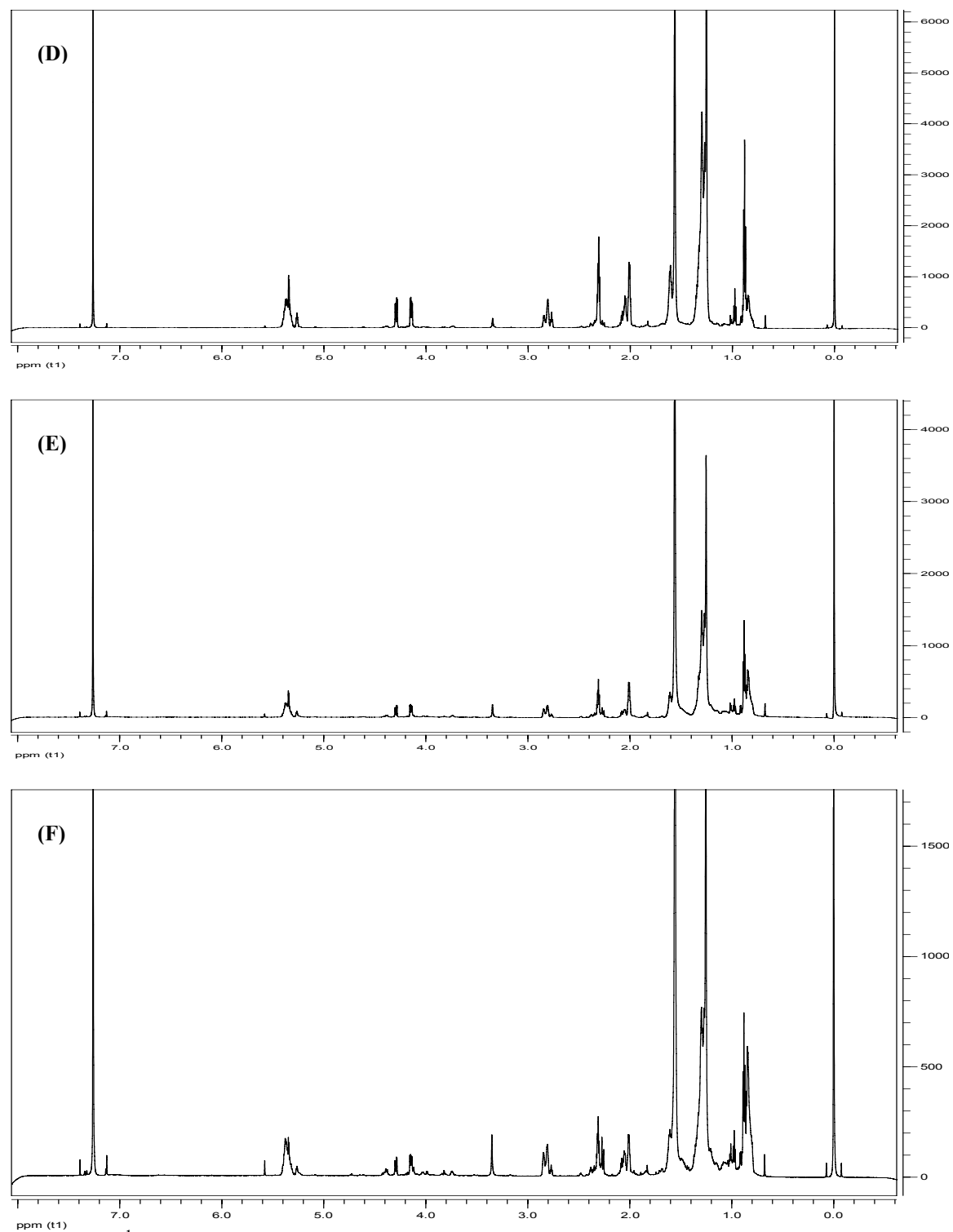
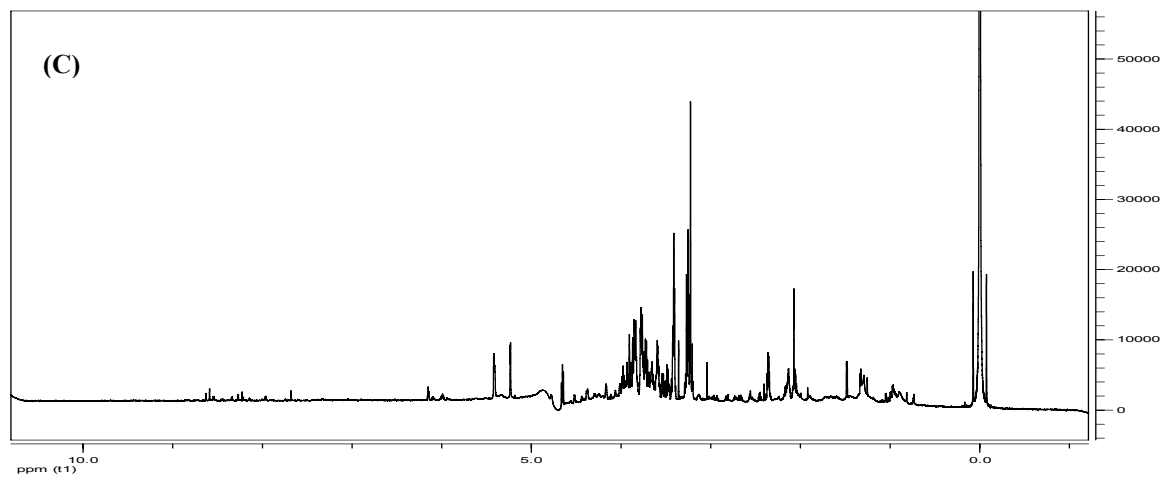
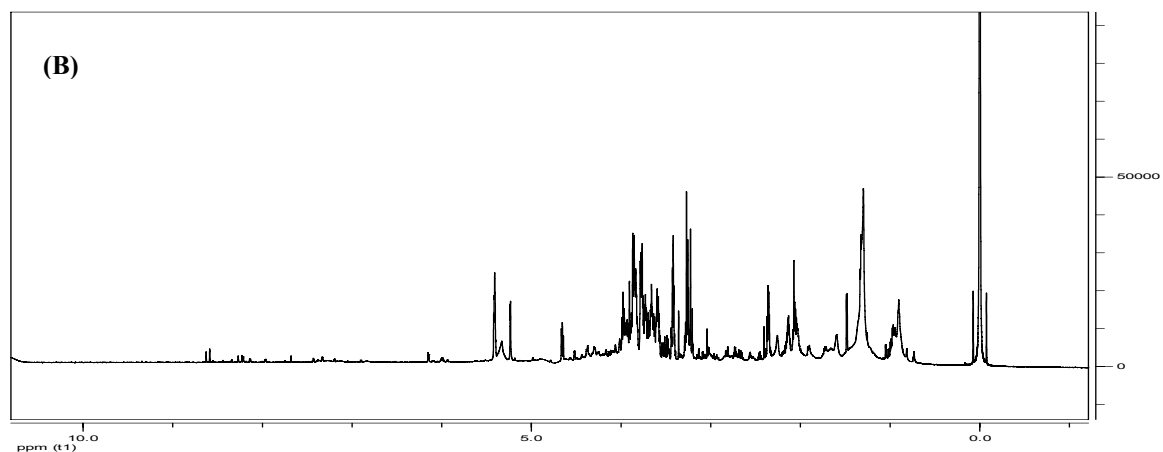
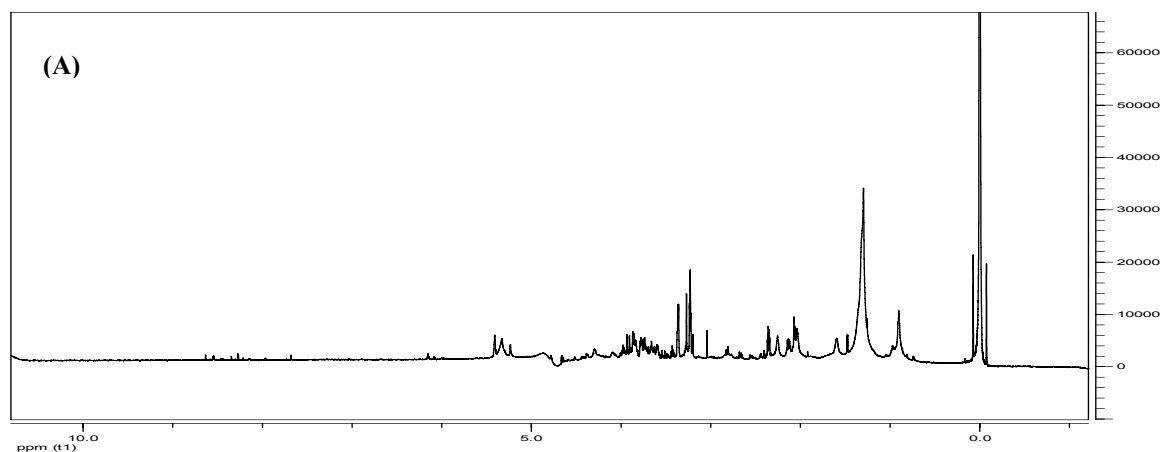


Figure S4. ^1H NMR (800 MHz) profile of (A-C) female and (D-F) male lipid soluble zebrafish liver extract. The identified peaks are listed in Table 3.



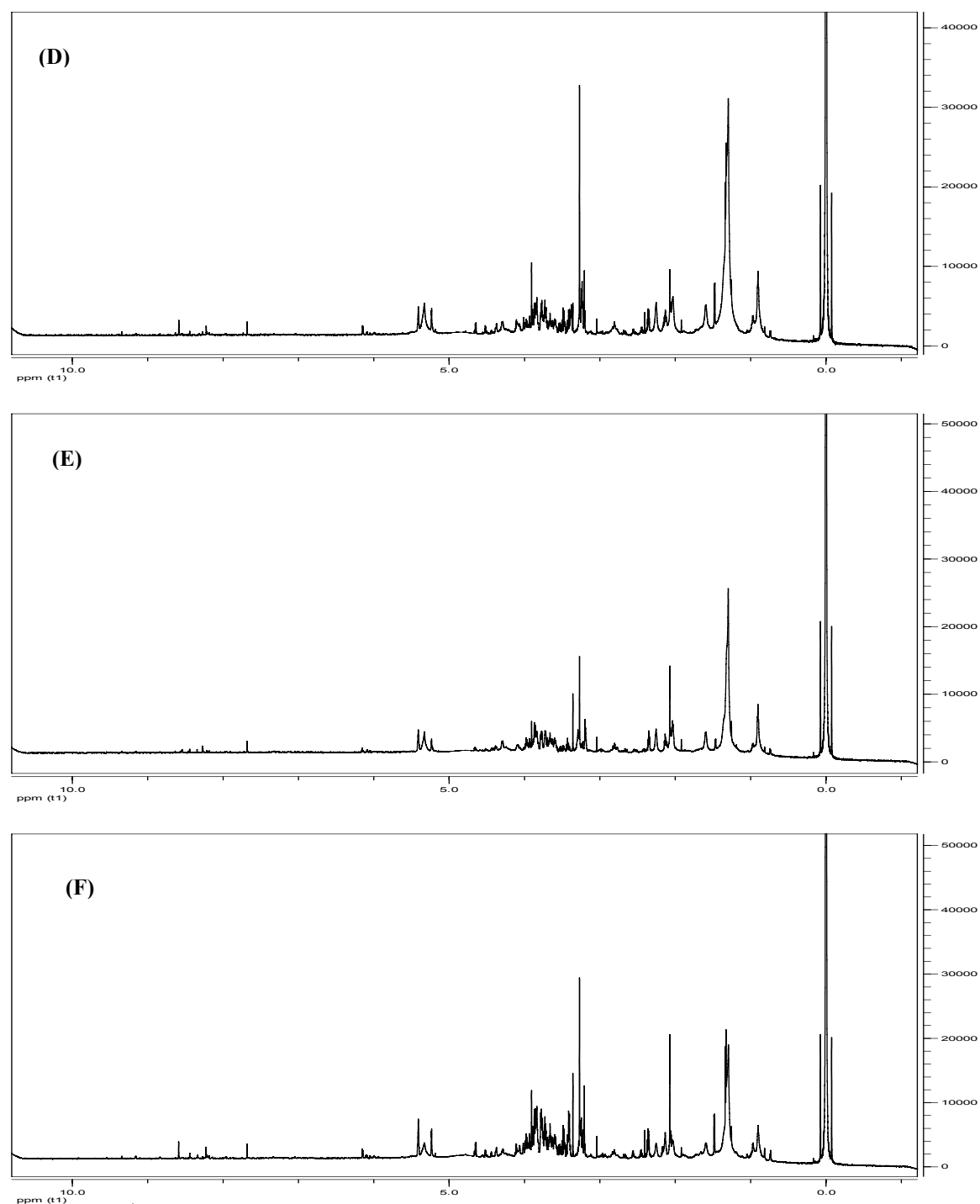


Figure S5. ^1H NMR (800 MHz) profile of (A-C) female and (D-F) male lipid soluble zebrafish liver extract. The identified peaks are listed in Table 4.