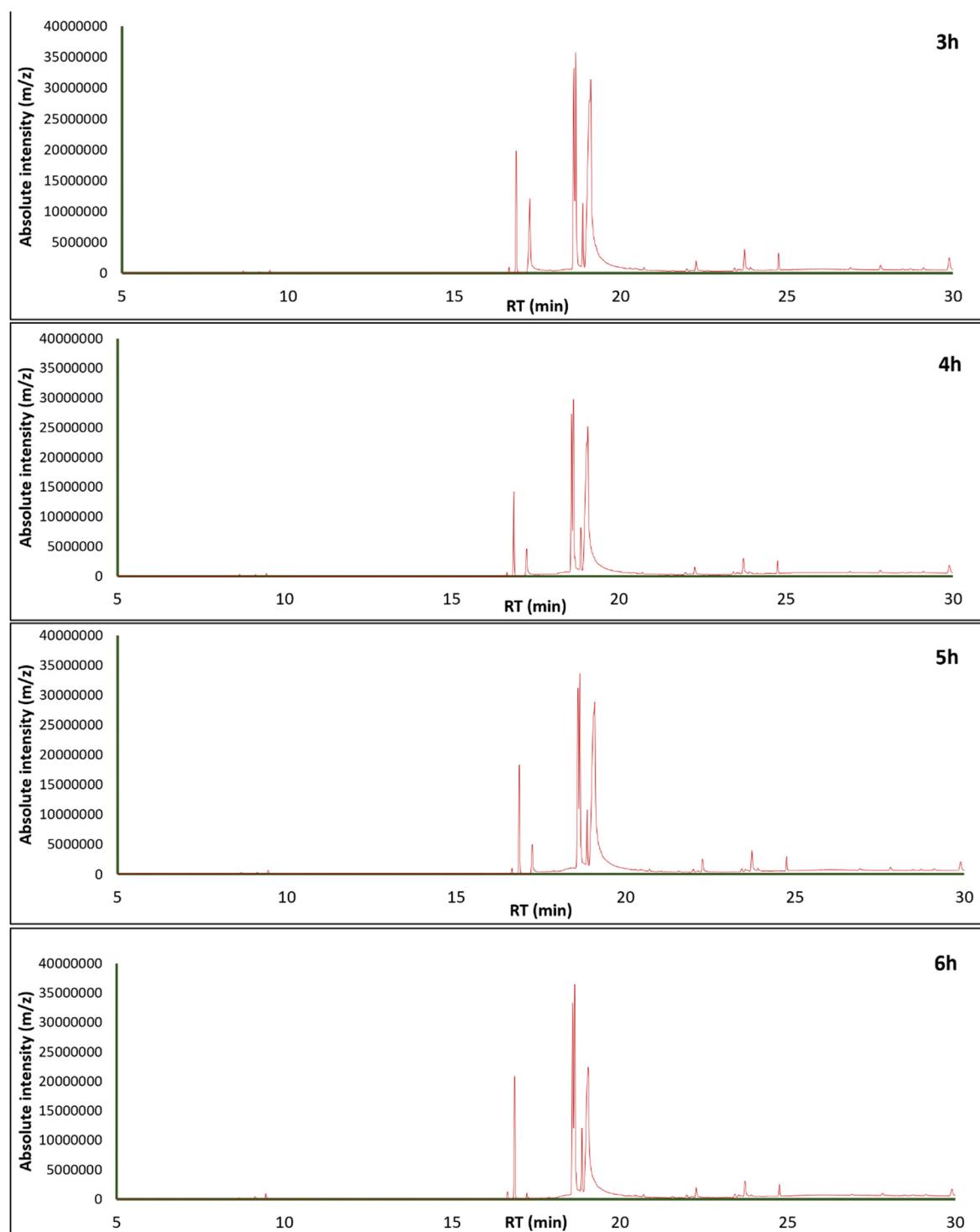


## Supplementary Figures



**Figure S1.** GC-MS spectra of JCME at different reaction times.

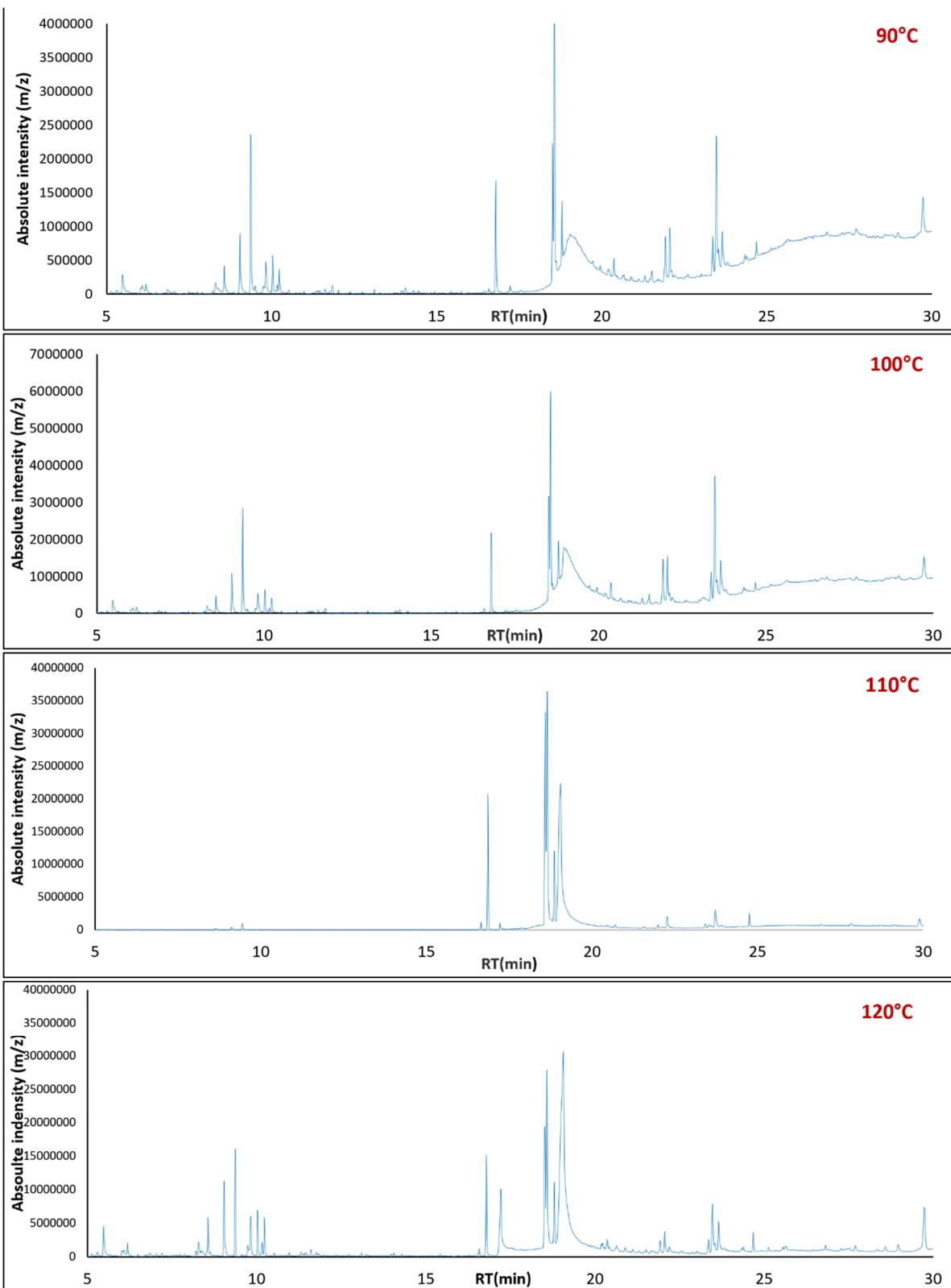
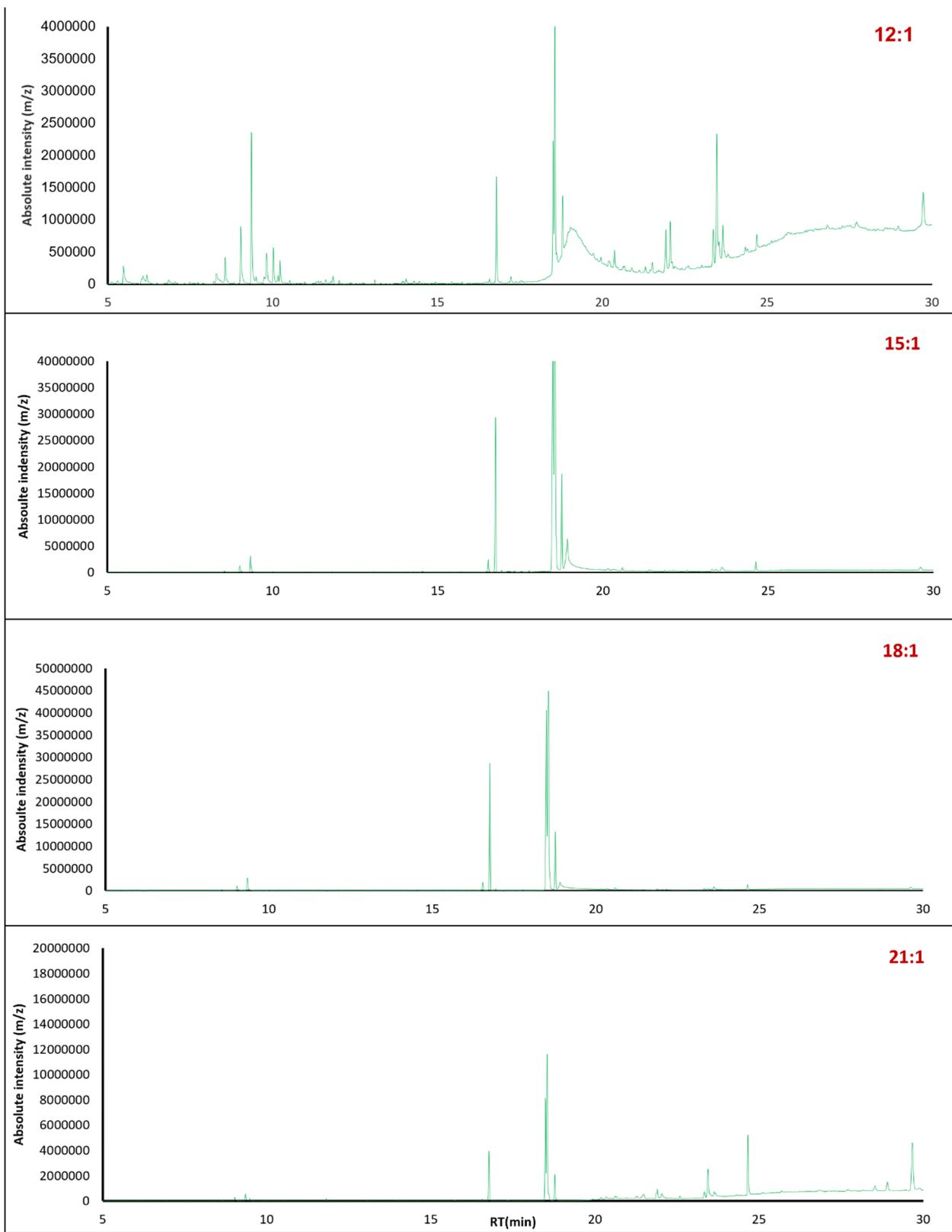
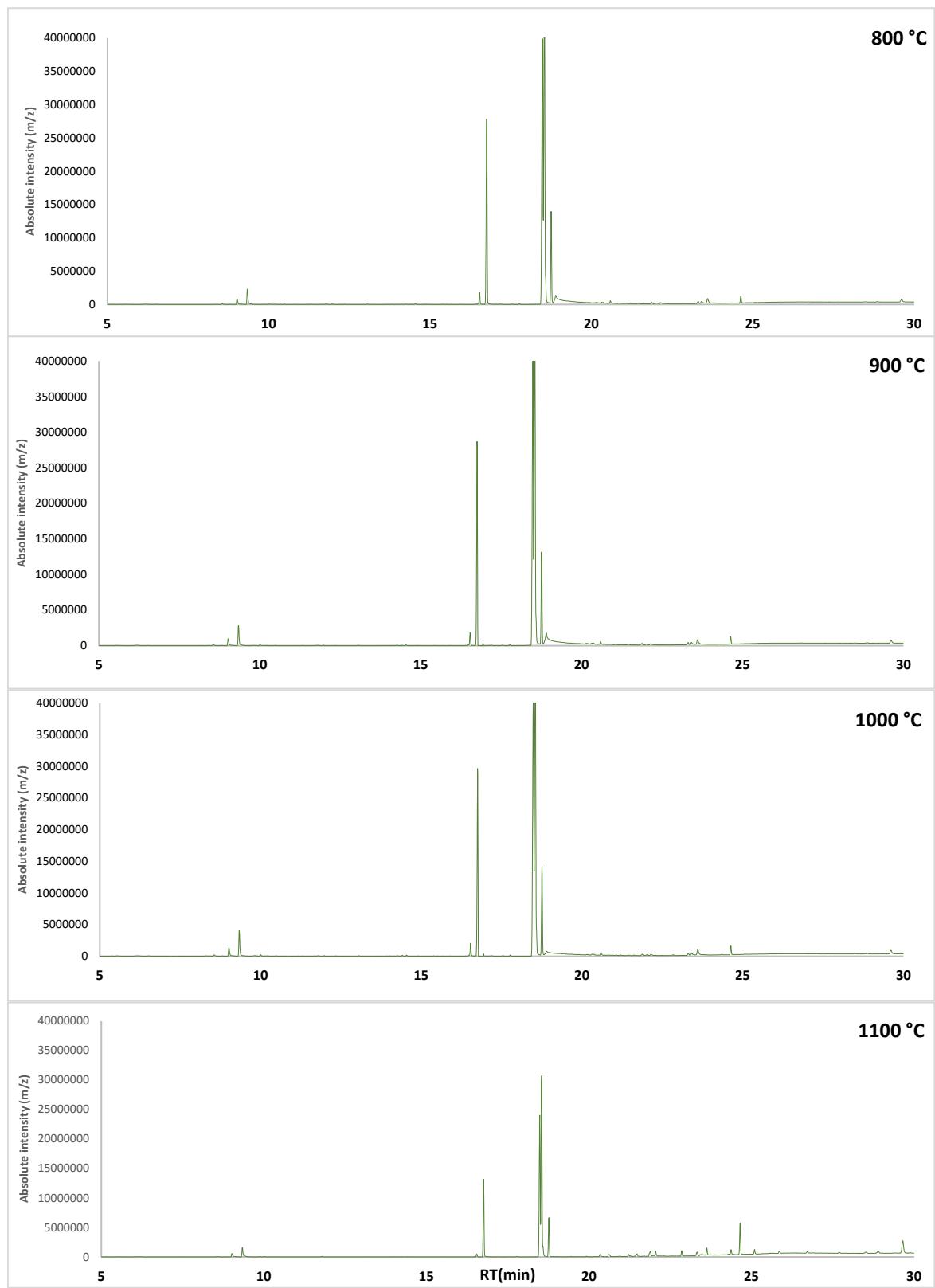


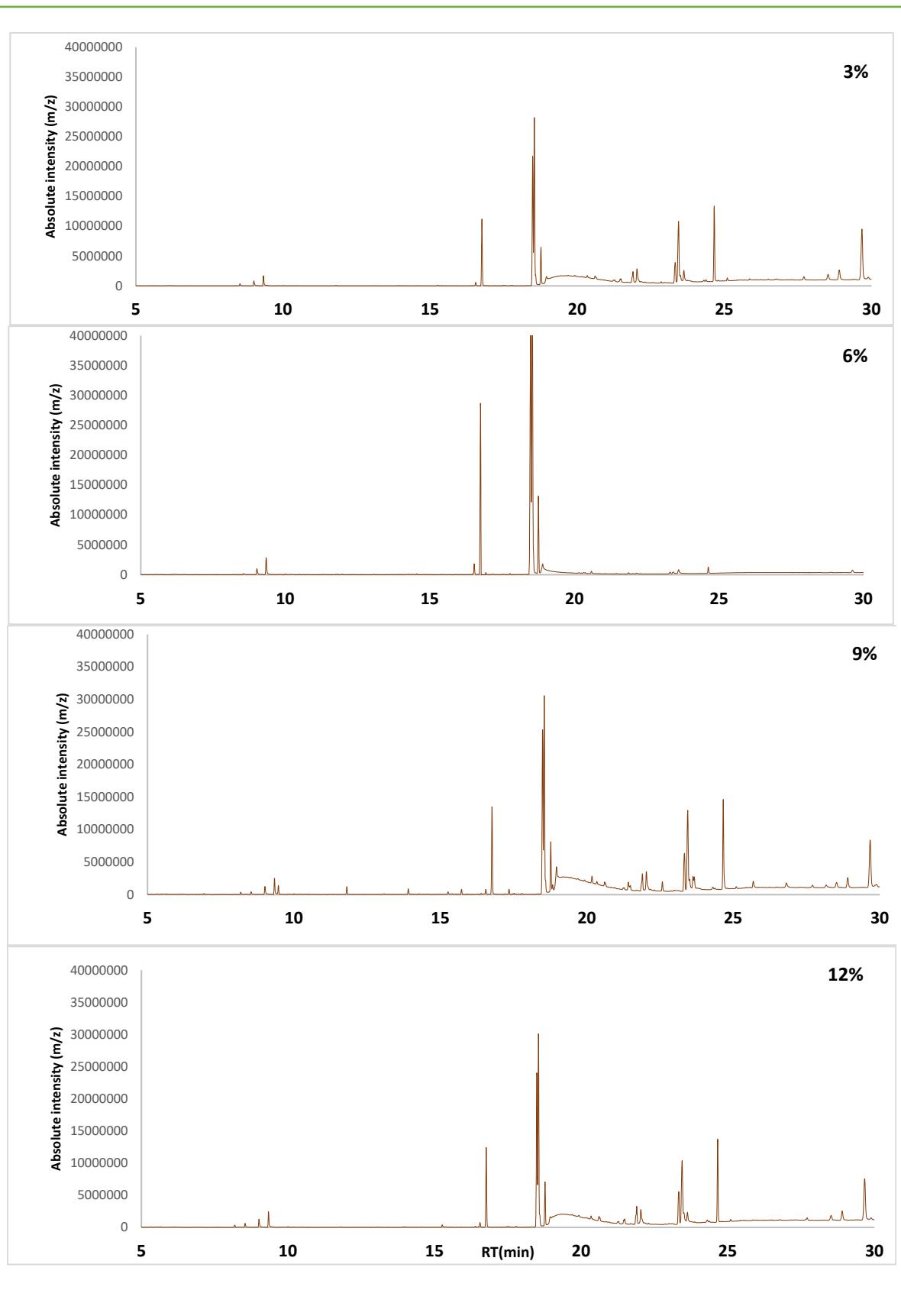
Figure S2. The GC-MS spectra of JCME in different reaction temperatures.



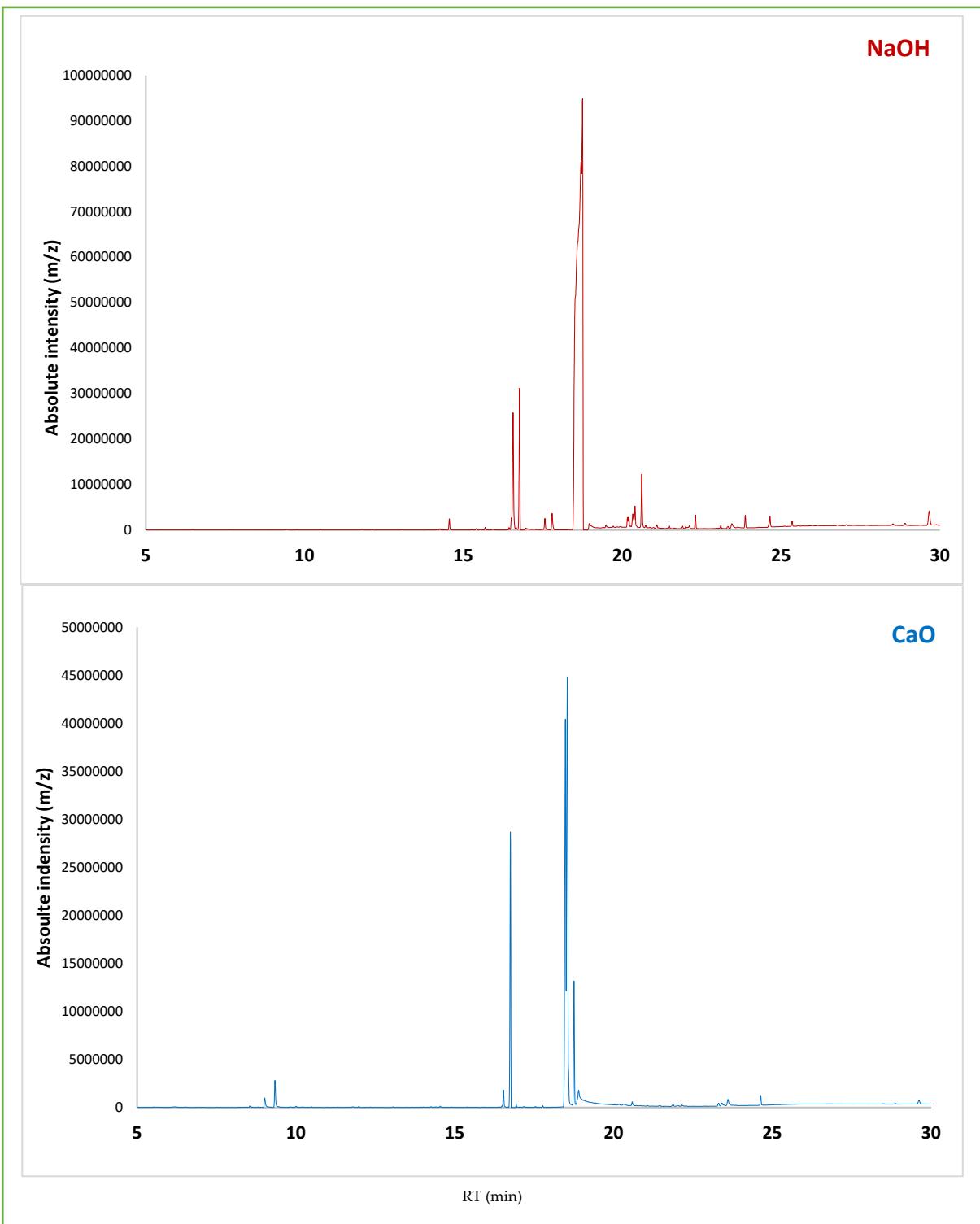
**Figure S3.** The GC-MS spectra of JCME in different methanol to oil ratio.



**Figure S4.** The GC-MS spectra of JCME at different calcined catalyst temperature.



**Figure S5.** The GC-MS spectra of JCME in different catalyst concentration.



**Figure S6.** The GC-MS spectra of JCME use catalyst (a) CaO from mussel shell (b) NaOH.