

Electronic Supplementary Material

Nitrogen distribution in the products from the hydrothermal liquefaction of *Chlorella sp.* and *Spirulina sp.*

Tianyi Bao¹, Yuanyuan Shao (✉)^{1,2}, Haiping Zhang¹, Jesse Zhu³

1 Collaborative Innovation Center of Chemical Science and Engineering (Tianjin), School of Chemical Engineering of Technology, Tianjin University, Tianjin 300072, China

2 Tianjin Key Laboratory of Membrane Science and Desalination Technology, Tianjin 300072, China

3 Department of Chemical & Biochemical Engineering, The University of Western Ontario, Ontario N6A 3K7, Canada

E-mail: yshao@tju.edu.cn

1. GC-MS results of identified compounds (*Chlorella sp.*)

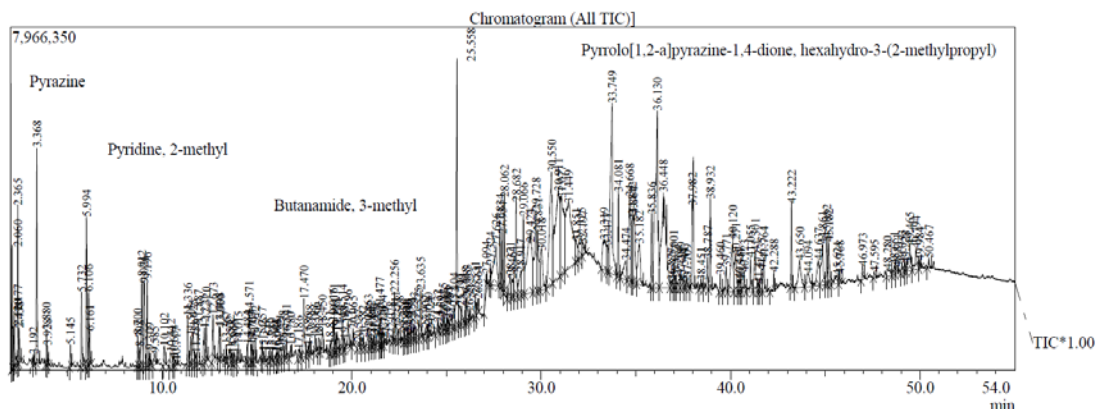


Fig.1 TIC of biocrude under T: 240°C, RT: 60 mins, SLR:10%

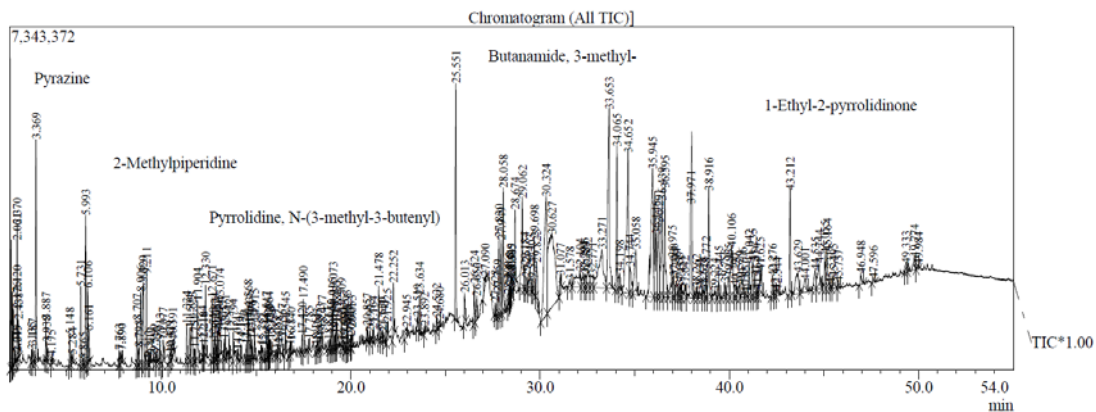


Fig.2 TIC of biocrude under T: 260°C, RT: 60 mins, SLR:10%

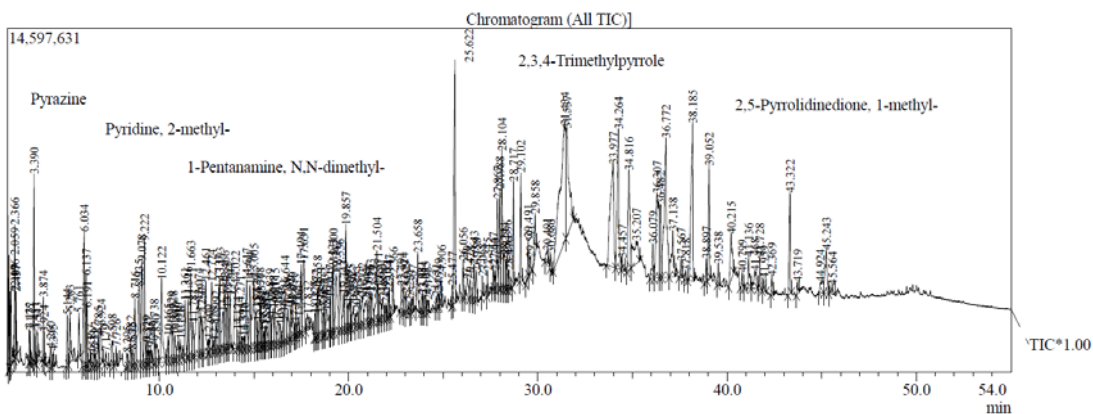


Fig.3 TIC of biocrude under T: 280°C, RT: 60 mins, SLR:10%

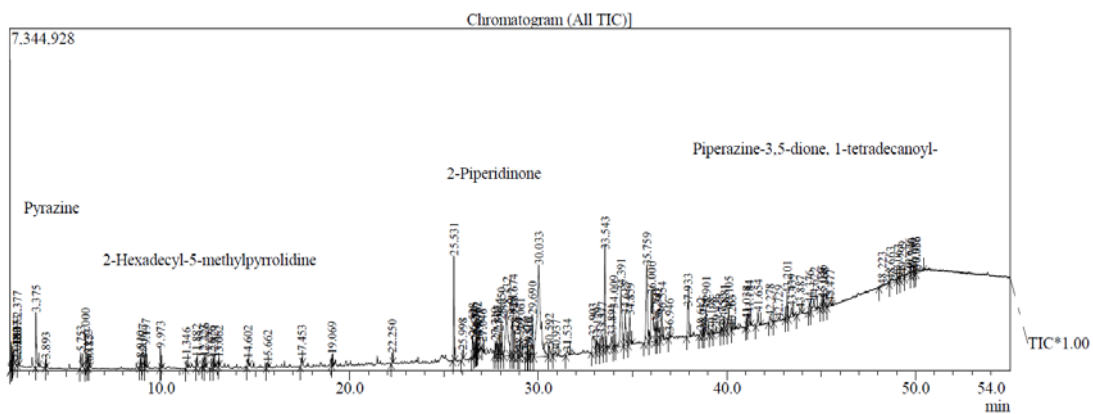


Fig.4 TIC of biocrude under T: 260°C, RT: 30 mins, SLR:10%

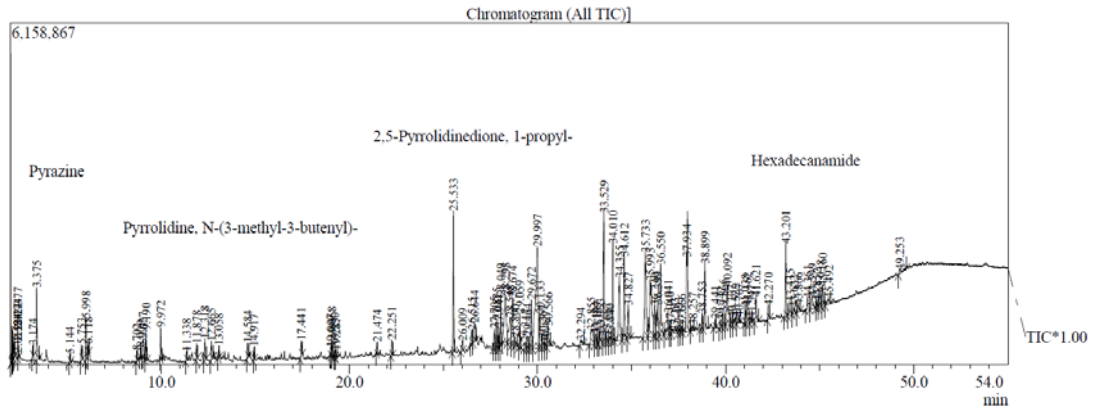


Fig.5 TIC of biocrude under T: 260°C, RT: 90 mins, SLR:10%

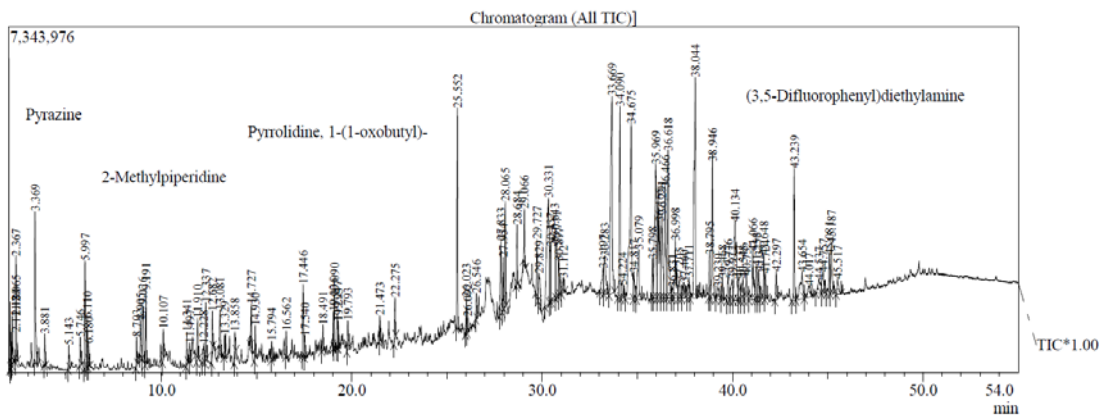


Fig.6 TIC of biocrude under T: 260°C, RT: 60 mins, SLR:15%

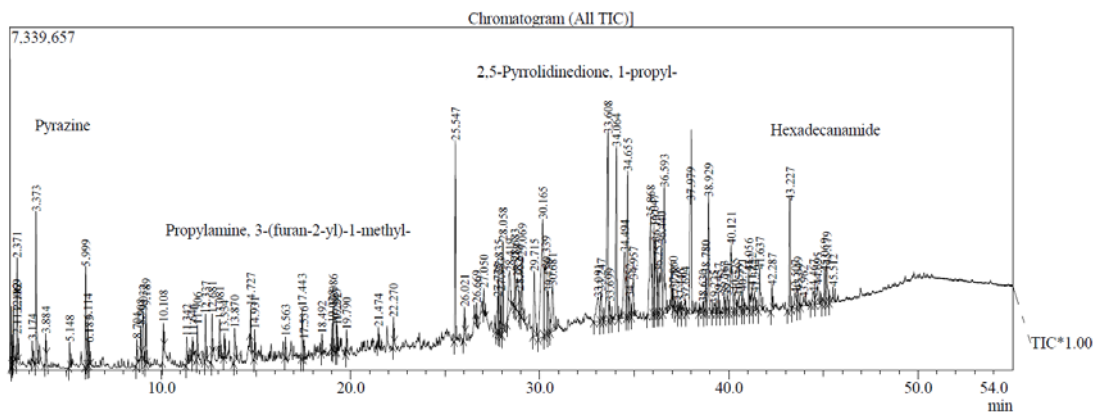


Fig.7 TIC of biocrude under T: 260°C, RT: 60 mins, SLR:20%

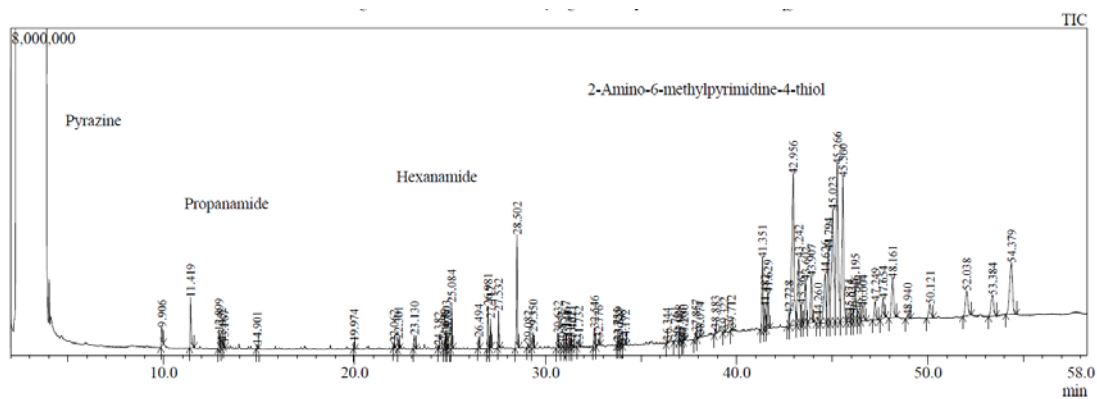


Fig.8 TIC of aqueous phase under T: 240°C, RT: 60 mins, SLR:10%

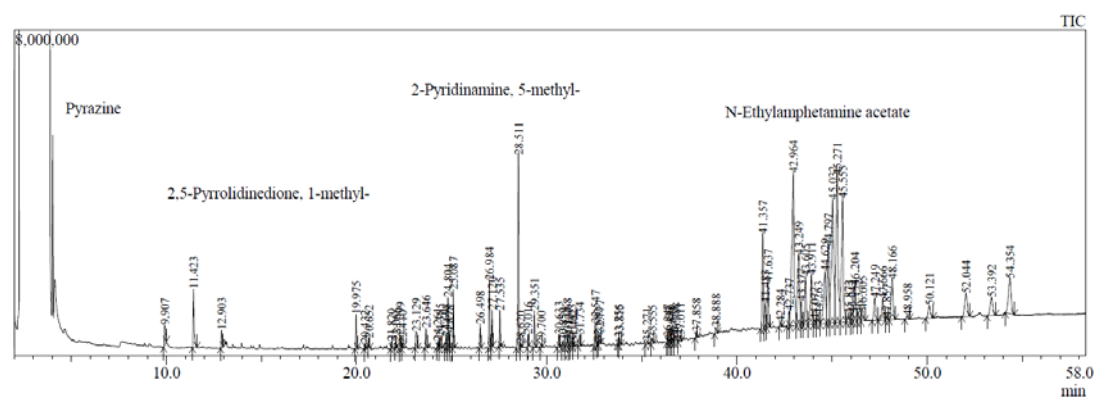


Fig.9 TIC of aqueous phase under T: 260°C, RT: 60 mins, SLR:10%

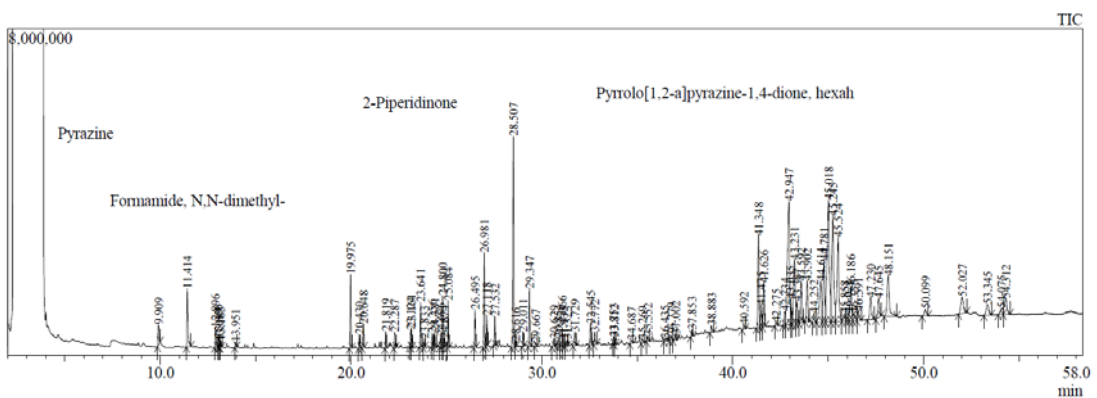


Fig.10 TIC of aqueous phase under T: 280°C, RT: 60 mins, SLR:10%

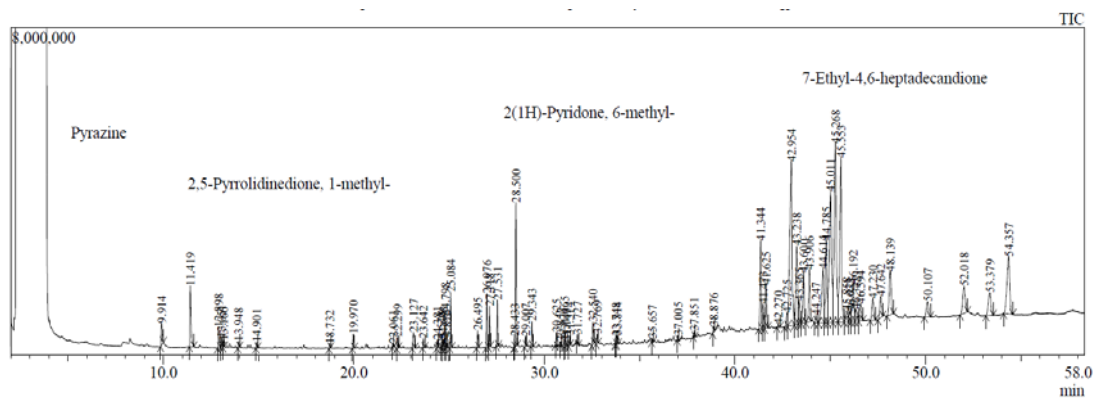


Fig.11 TIC of aqueous phase under T: 260°C, RT: 30 mins, SLR:10%

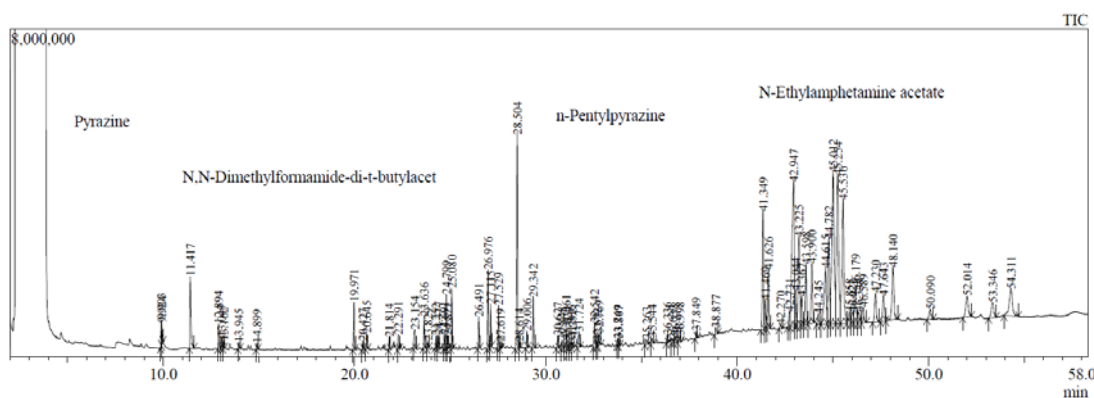


Fig.12 TIC of aqueous phase under T: 260°C, RT: 90 mins, SLR:10%

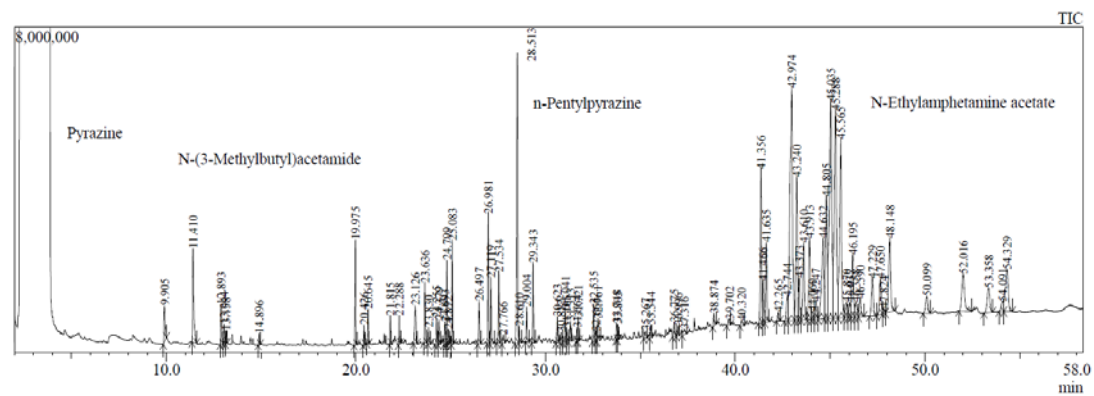


Fig.13 TIC of aqueous phase under T: 260°C, RT: 60 mins, SLR:15%

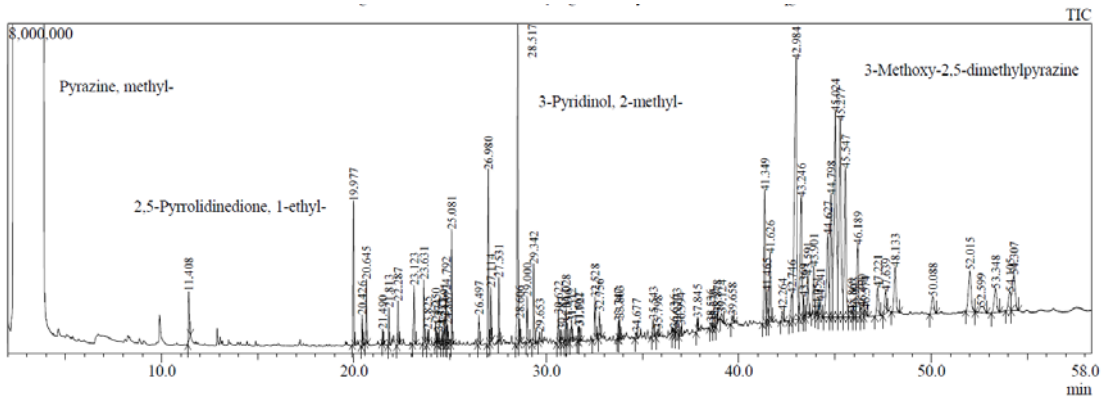


Fig.14 TIC of aqueous phase under T: 260°C, RT: 60 mins, SLR:20%

2. GC-MS results of identified compounds (*Spirulina sp.*)

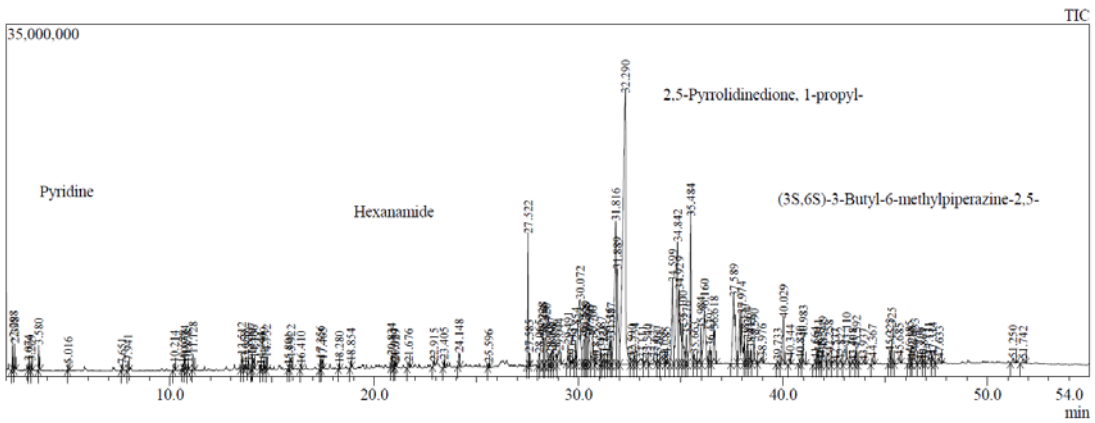


Fig.15 TIC of biocrude under T: 240°C, RT: 60 mins, SLR:10%

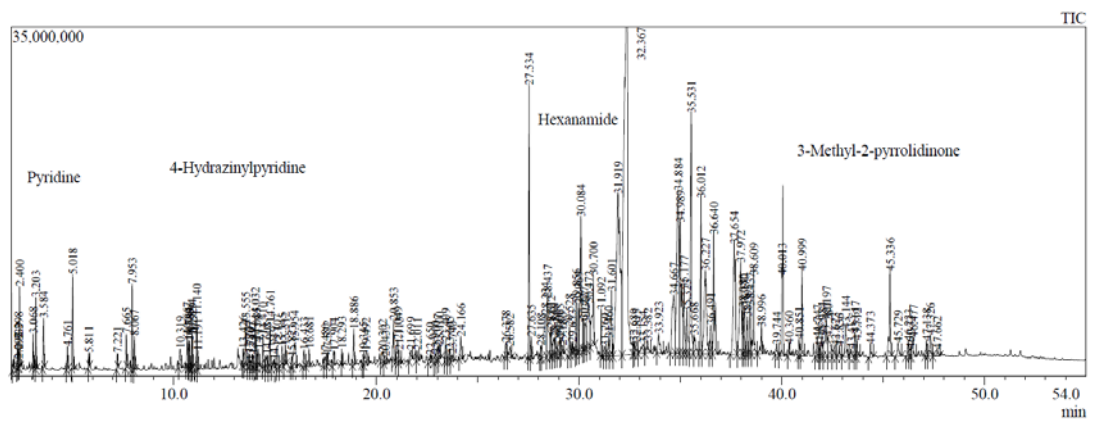


Fig.16 TIC of biocrude under T: 260°C, RT: 60 mins, SLR:10%

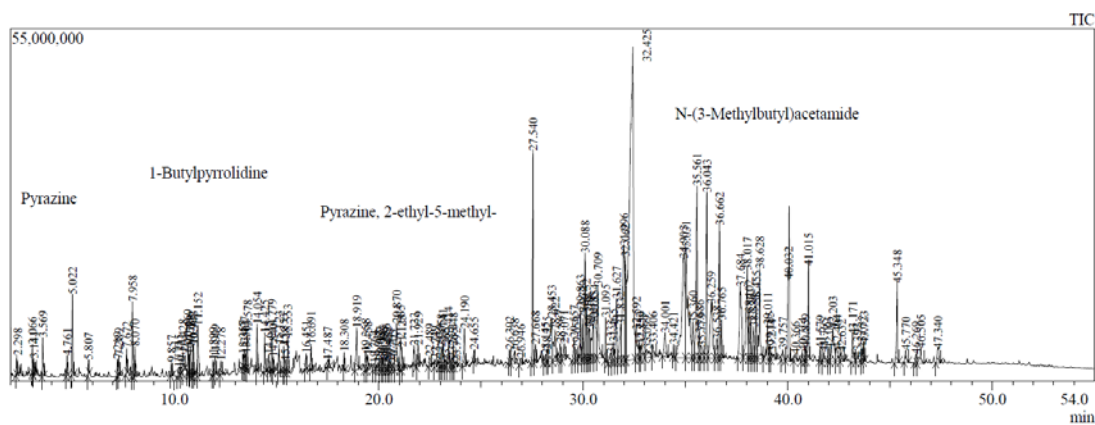


Fig.17 TIC of biocrude under T: 280°C, RT: 60 mins, SLR:10%

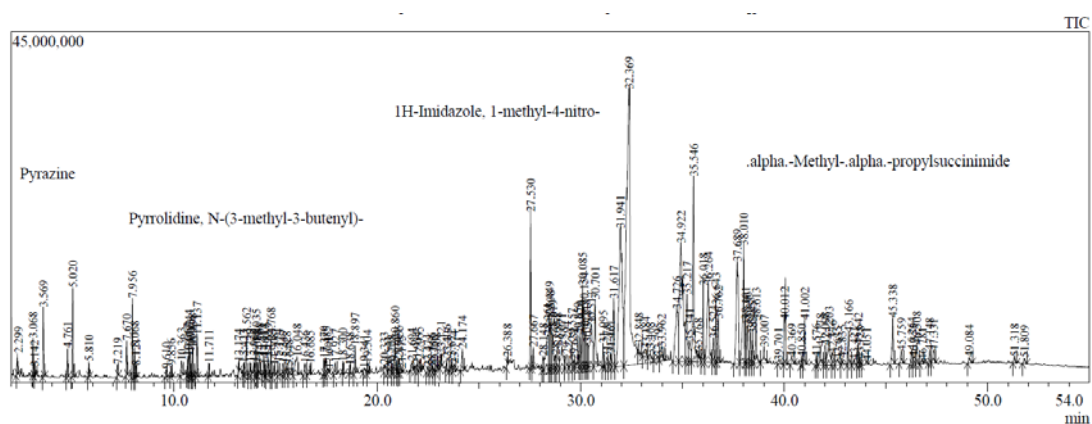


Fig.18 TIC of biocrude under T: 260°C, RT: 30 mins, SLR:10%

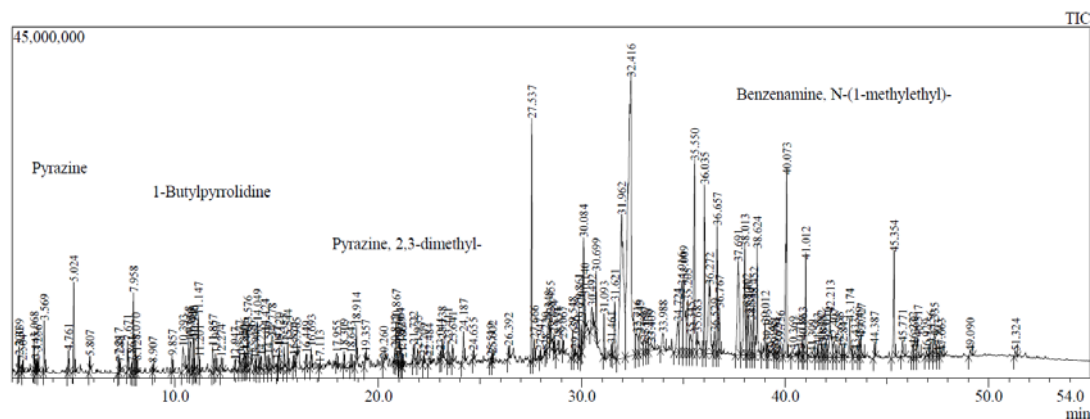


Fig.19 TIC of biocrude under T: 260°C, RT: 90 mins, SLR:10%

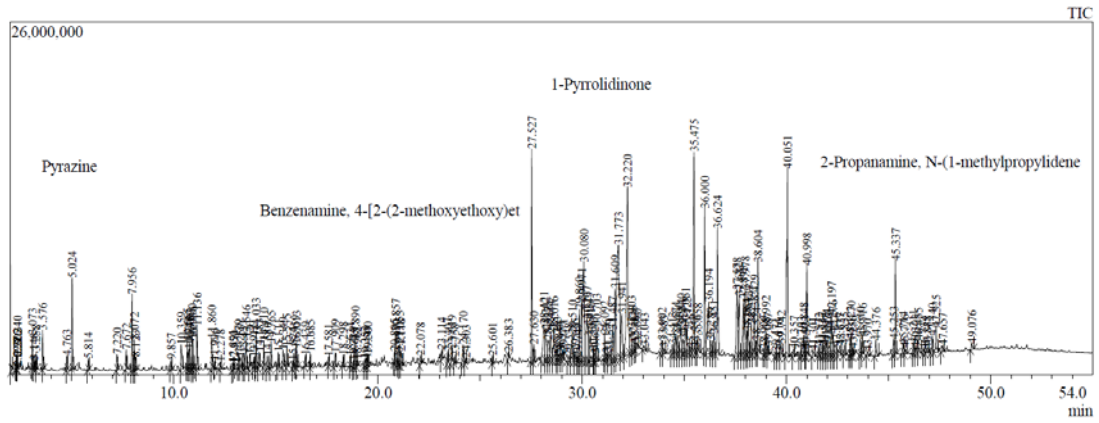


Fig.20 TIC of biocrude under T: 260°C, RT: 60 mins, SLR:15%

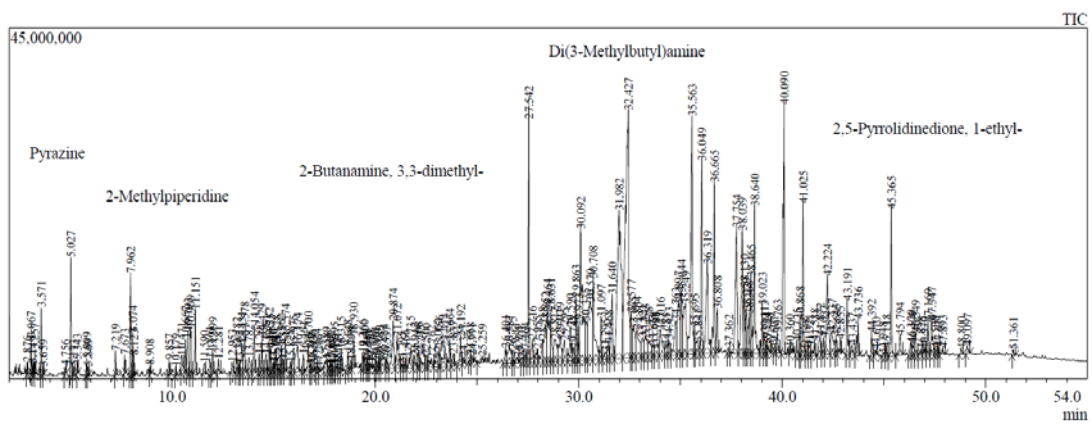


Fig.21 TIC of biocrude under T: 260°C, RT: 60 mins, SLR:20%

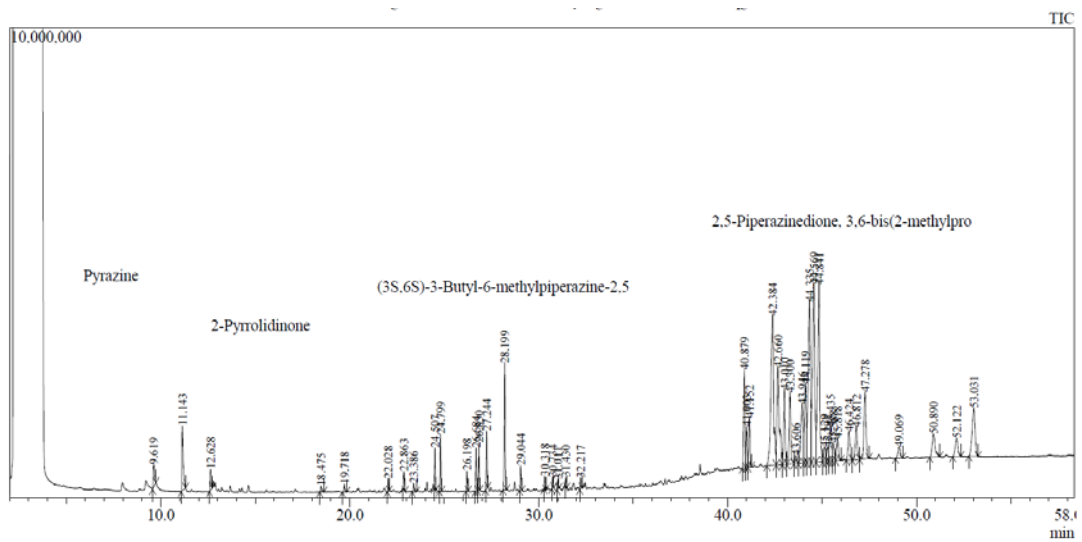


Fig.22 TIC of aqueous phase under T: 240°C, RT: 60 mins, SLR:10%

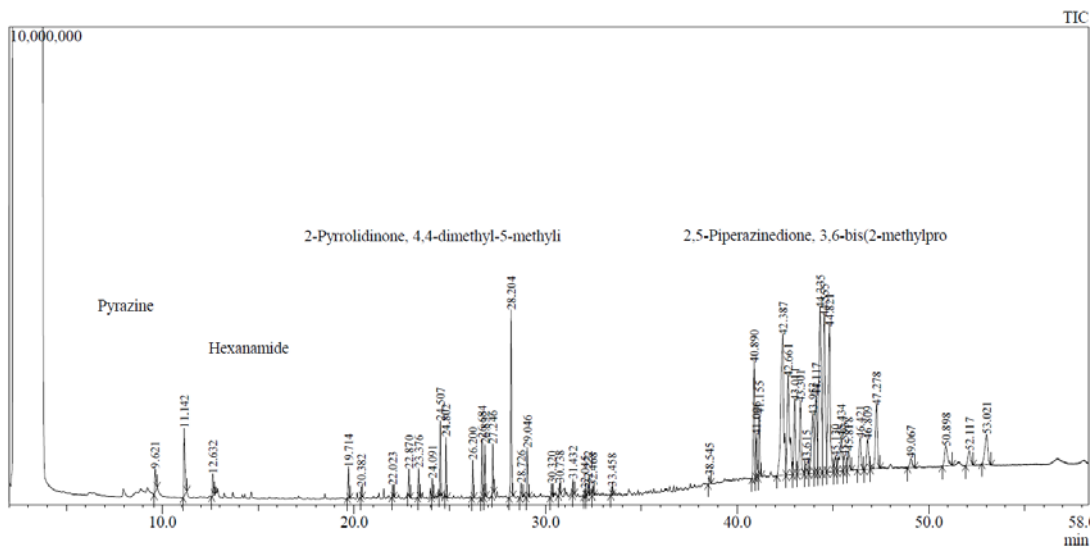


Fig.23 TIC of aqueous phase under T: 260°C, RT: 60 mins, SLR:10%

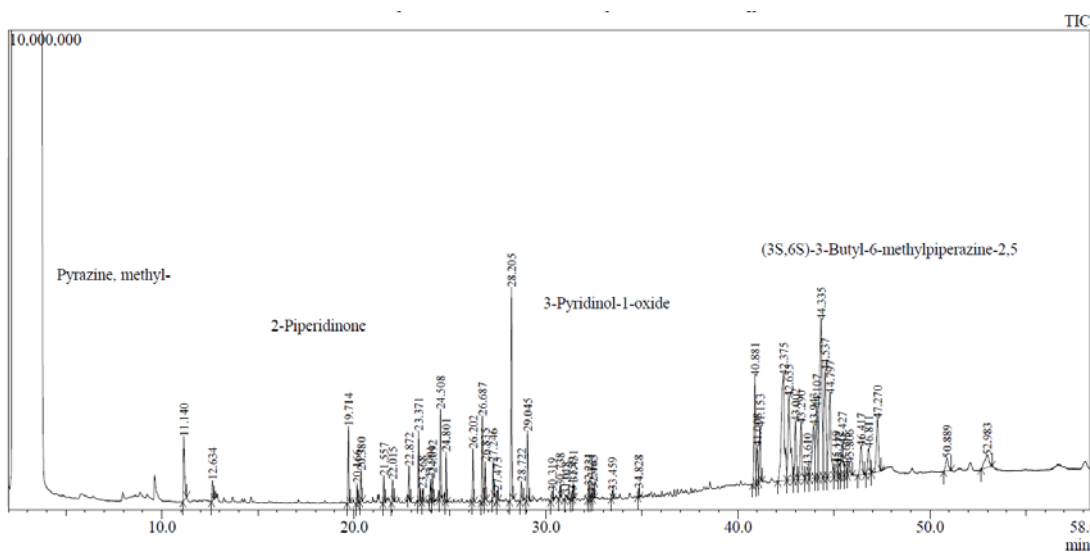


Fig.24 TIC of aqueous phase under T: 280°C, RT: 60 mins, SLR:10%

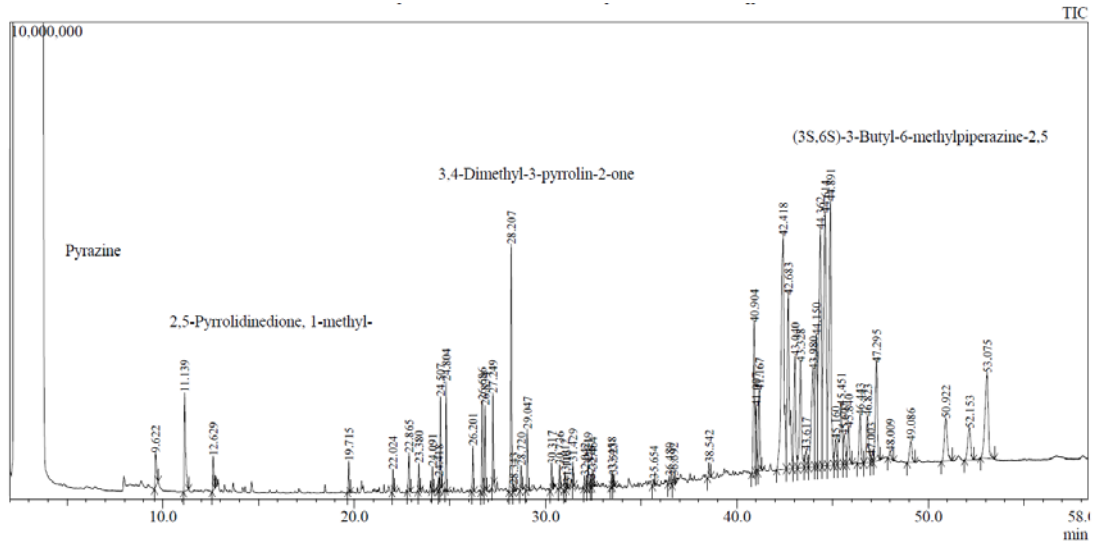


Fig.25 TIC of aqueous phase under T: 260°C, RT: 30 mins, SLR:10%

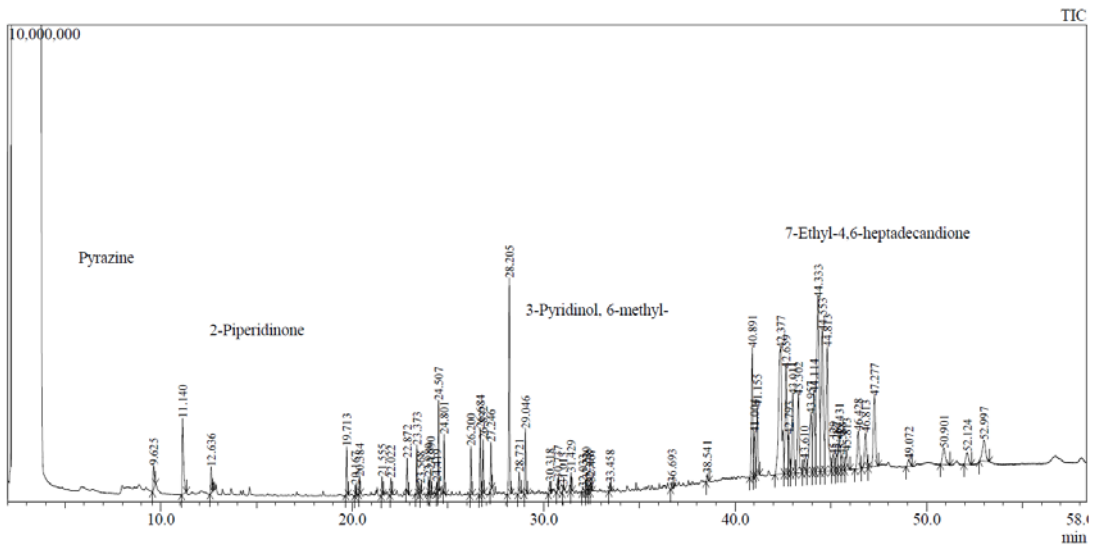


Fig.26 TIC of aqueous phase under T: 260°C, RT: 90 mins, SLR:10%

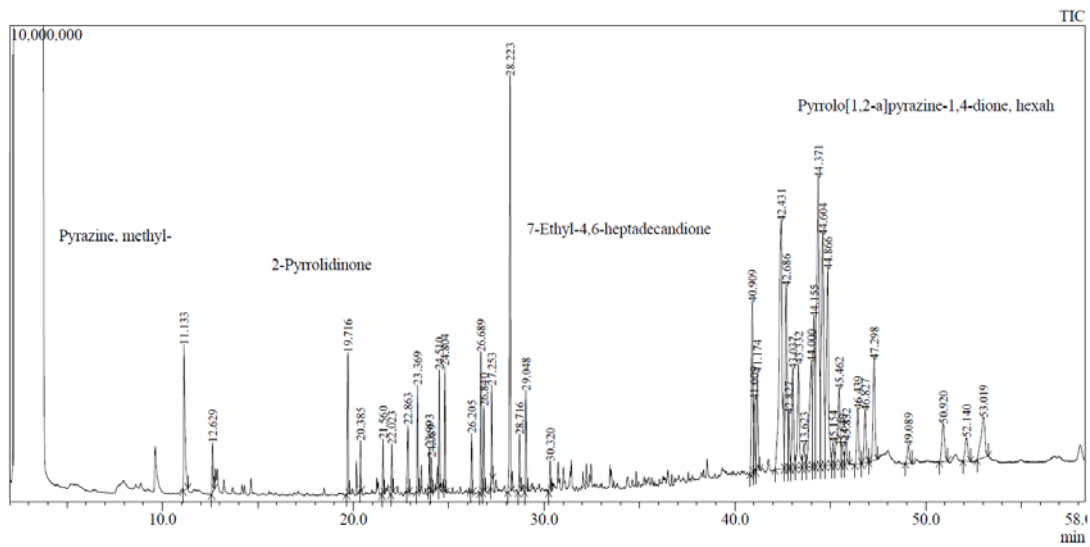


Fig.27 TIC of aqueous phase under T: 260°C, RT: 60 mins, SLR:15%

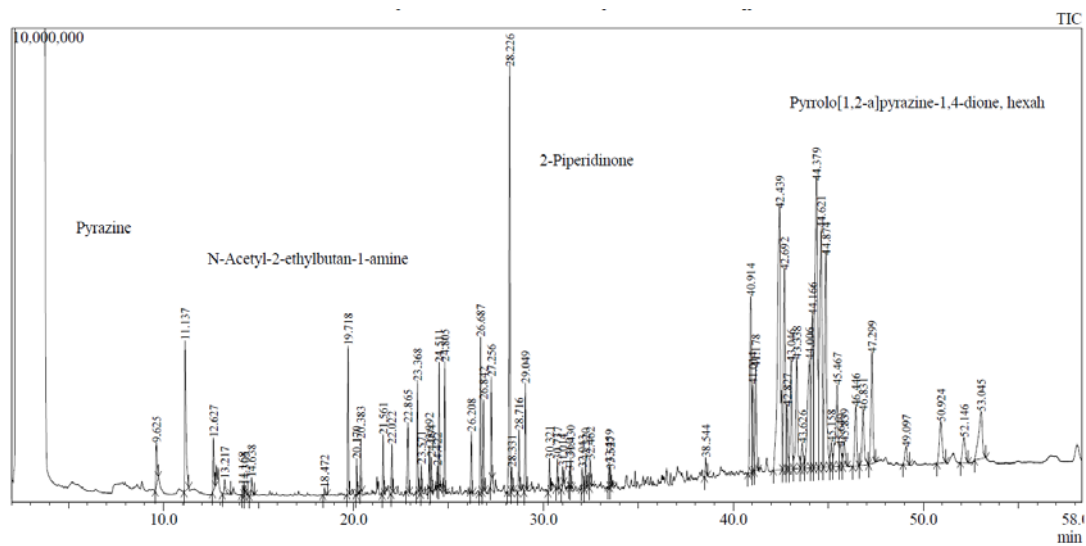


Fig.28 TIC of aqueous phase under T: 260°C, RT: 60 mins, SLR:20%