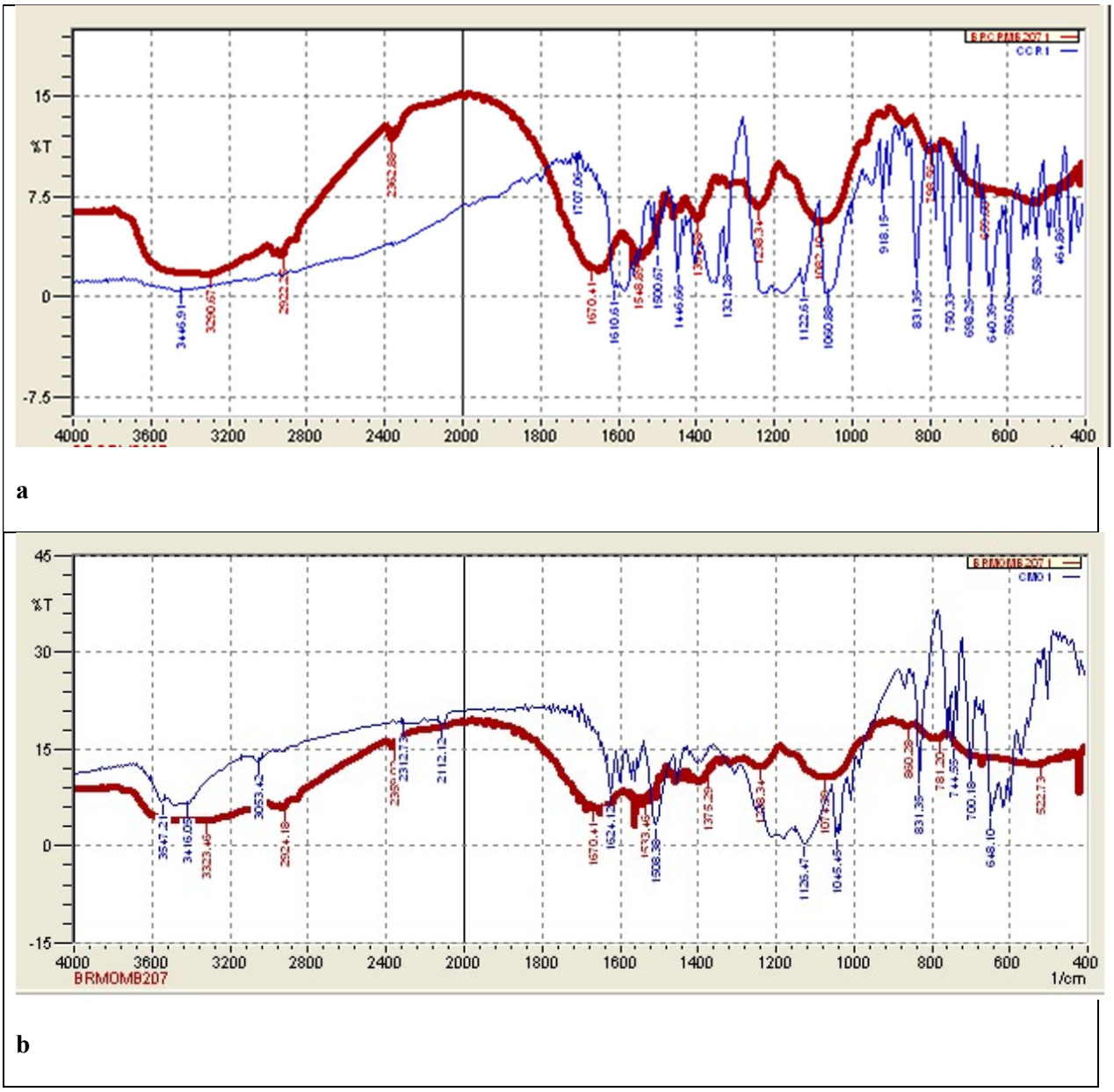
Genome sequencing and analysis of *Alcaligenes faecalis* subsp. phenolicus MB207

Zarrin Basharat[a], Azra Yasmin[a*], Tongtong He[b], Yigang Tong[b]

[a] Microbiology & Biotechnology Research Lab, Department of Environmental Sciences, Fatima Jinnah Women University, Rawalpindi 46000, Pakistan.

[b] State Key Laboratory of Pathogen and Biosecurity, Beijing Institute of Microbiology and Epidemiology, Beijing 100071, China.



Supplementary Fig. 1. FTIR spectrum of control i.e. (a) Methyl orange dye vs degraded Methyl orange and (b) Congo Red vs degraded Congo red by *Alcaligenes* sp. MB207 in LB-broth.

FTIR analysis of Congo red control showed specific peaks in the fingerprint region 1650 cm^{-1} (for amide functional group), 1300 cm^{-1} N=N symmetric stretching vibration of azide group, 1310 cm^{-1} (ring structure vibration), around 1400 cm^{-1} (napthalene ring), 1505-1550 cm^{-1} (C=C vibration in the naphthalene ring), 1530 cm^{-1} (N=N stretching vibration) , 1080 cm^{-1} (C-N stretching vibration of amine),around 990 cm^{-1} (S=O stretching vibration), 1110 cm^{-1} (Ring vibration) including C-S and symmetric SO_3 stretching vibration, 800 cm^{-1} (C-C skeletal vibration), 660 cm^{-1} (C-S stretching and vibration). FTIR spectrum of degraded Congo red product by *Alcaligenes* sp. MB207 showed

characteristic peaks at 3900 cm^{-1} (O-H stretching vibration), 2930 cm^{-1} (C-H stretching vibration), 2940 cm^{-1} (N-H stretching vibration), 2400 cm^{-1} (N-H stretching vibration), 1600 cm^{-1} (C=C stretching vibration probably at –diazene position), 1450cm^{-1} (asymmetrical C-H deformation vibration), 1500 cm^{-1} (N-H bending vibrations),1198 cm^{-1} (C-H skeletal vibration), 989 cm^{-1} (C-C skeleton vibration), 900 cm^{-1} (N-H out-of-plane bending vibrations), 950 cm^{-1}(C-C stretching vibration), 880 cm^{-1}(C-N stretching vibration of amine), 790 cm^{-1} (C-H out-of-plane deformation vibrations of meta-di-substituted aromatic compounds) and 500 cm^{-1} (C-C skeleton vibration).

FTIR analysis of Methyl orange control showed specific peaks at 3100 cm^{-1} (asymmetric C-H stretching vibration), 3060 cm^{-1} (=C-H stretching vibration), 2112 cm^{-1} (C-C and CN stretching vibrations), 1700 cm^{-1} (C=C stretching vibration), 1624 cm^{-1} (C=C stretching vibration), 1610 cm^{-1} (C=C stretching vibration), 1585 cm^{-1} (C=C stretching vibration), 1500 cm^{-1} (C-H symmetric deformation vibration), 1385 cm^{-1} (symmetric C-H deformation vibration), 1186 cm^{-1} (C-H skeletal vibration), 1050 cm^{-1} ($C-H_3$ rocking vibration),1010 cm^{-1} (C-C skeleton vibration), 990 cm^{-1} (C-C skeleton vibration), 845 cm^{-1} (C-H vibration), 800 cm^{-1}(aromatic C-H out-of-plane deformation vibrations), 720 cm^{-1} (CH_3 rocking vibration), 655 cm^{-1} (C-H wagging vibration), 642 cm^{-1} (Ring deformation), 595 cm^{-1} (C-C skeletal vibrations ,510 cm^{-1}(C-C skeletal vibration), 495 cm^{-1} (skeletal vibration), 410 cm^{-1} (skeletal vibration), 445 cm^{-1} (skeletal vibration). Degraded product showed peaks at around 2900 cm^{-1} (C-H stretching vibration), 3100 cm^{-1} (N-H stretching vibration-associated to =C), 2400 cm^{-1} (asymmetric N-H stretching vibration), 1700 cm^{-1} (C=C stretching vibration), 1600 cm^{-1} (C-H vibration), 1506 cm^{-1} (N-H deformation vibrations), 1200 cm^{-1} (C-H skeletal vibration), 1050cm^{-1} (C-H symmetrical deformation vibration), 831 cm^{-1} (C-H out-of-plane deformation vibration), 770 cm^{-1} (N-H out-of-plane bending vibrations).