

Supplementary materials

for

Characterization of *Dietzia cercidiphylli* C-1 isolated from extra-heavy oil contaminated soil

Xiaoli Dai, Guangxu Yan, Shaohui Guo*

State Key Laboratory of Heavy Oil Processing, Beijing Key Laboratory of Oil & Gas
Pollution Control, China University of Petroleum-Beijing, 18 Fuxue Road, Changping
District, Beijing 102249, PR China

* Corresponding author: Shaohui Guo

(Tel: 86-010-8973-2278; Fax: 86-010-8973-2278; E-mail: cupgsh@163.com)

Basic Concept^{1,3]}

Light oil, also called conventional oil, has an API gravity of at least 22° and a viscosity less than 100 centipoise (cP).

Heavy oil has a density equal or lower than 20 API and a viscosity of 100 centipoise cP.

Extra-heavy oil is that portion of heavy oil having an API gravity of less than 10°, which is denser than water.

GC-MS operational condition

GC-MS analysis was accomplished on an Agilent 7890A/5975C System equipped with an HP-5MS fused-silica capillary column (60m× 0.25mm×0.25mm). The GC oven temperature program was as follows: initial temperature of 50°C, with isothermal operation for 1min; heating to 120°C at a constant rate of 15°Cmin⁻¹; and heating to a final temperature of 310°C at a constant rate of 3°Cmin⁻¹, with a 20min isothermal. The MS detector was operated in the electron impact (EI) ionization mode with ionization voltage of 70eV. The temperature of the interface, EI source and quadrupole were 280°C, 230 °C and 150 °C, respectively. Data were acquired in the full scan mode in the m/z range of 50-800 at 2.59 scans s⁻¹. The GC-MS data analyses were conducted using Xcalibur 4.0 software and with reference to the NIST/EPA/NIH 2.0 mass spectral library database.

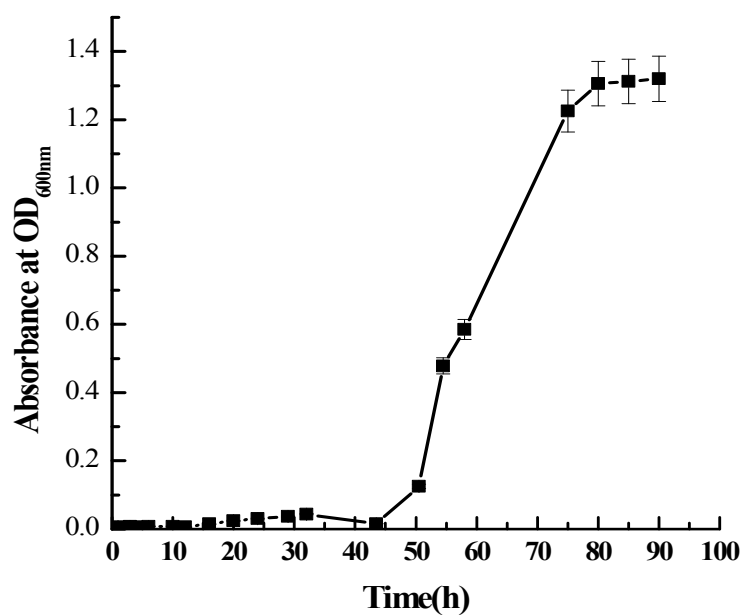


Fig. S1 Growth curve of strain Y-1

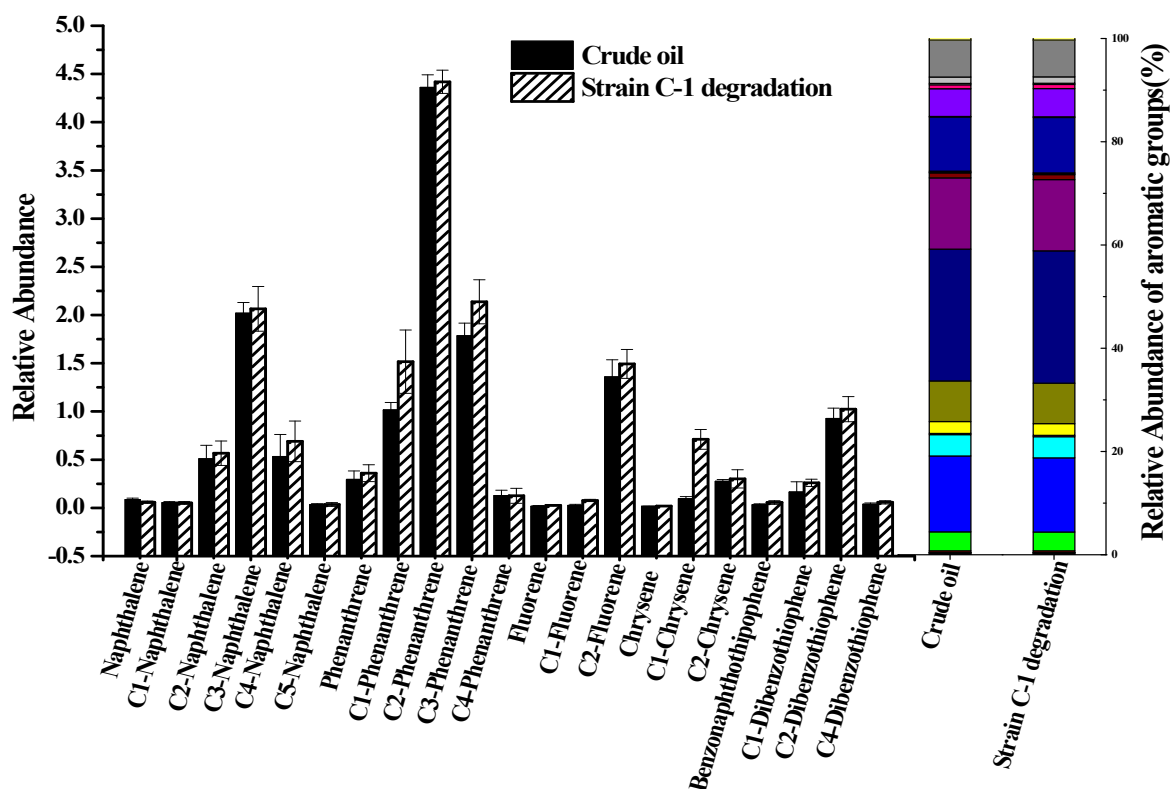


Fig. S2 Relative abundance of individual polycyclic aromatic groups after 14 days of strain C-1 degradation

Reference

- 1 R. Meyer and E. Attanasi, Geological Survey Fact Sheet 70-03, 2003, <http://pubs.usgs.gov/fs/fs070-03/fs070-03.html>.
- 3 R. M. Palou, M. Lourdes Mosqueira, B. Z. Rendónb, E. M. Juárezc, C. B. Huicohead, J. C. C. López, J. Aburto, Journal Petrol. Sci. Eng., 2011, **75**, 274-282.