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Data Article

Morphotypes and pigment profiles of halophilic bacteria: Practical data useful for novelty, taxonomic categorization and for describing novel species or new taxa



Bhagwan N. Rekadwad^{a,b,*}, Chandrasahya N. Khobragade^b

^a National Centre for Microbial Resource (NCMR), National Centre for Cell Science (NCCS), Pune, India

^b School of Life Sciences, Swami Ramanand Teerth Marathwada University, Nanded, India

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ABSTRACT

Halophilic bacteria were isolated from oil spill samples collected from West-coast of Goa. Bacteria were isolated from oil studded soil, salt marsh and offshore samples (A, A7, CSM, CB and CM) collected along the West coastline in Goa (India) i.e. Arambol beach, Calangute beach, Candolim beach and Colva beach on Zobell Marine agar, R2A agar, Mannitol salt agar and Blood agar at temperature 22 to 24 °C. Isolates showed growth in the presence of hydrocarbons (1% phenanthrene and 2% bitumen). Diverse profiles of pigments were observed on different nutrient medium. Color of pigments produced on agar media recorded as per standard color chart. All isolates showed different growth pattern. Isolate no 11 (GOACSMMS-11) showed three different morphological features/growth patterns on Zobell Marine Agar and R2A medium in the presence of hydrocarbons. Results obtained yield new information which gives a clear idea about morphological features and pigmented profiles of hydrocarbon resistant morphotypes in the presence different media compositions. The presented datasets will be useful for studies on bacterial species showing high sequence similarity. Hence, generated

* Corresponding author at: National Centre for Microbial Resource (NCMR), National Centre for Cell Science (NCCS), Pune, India.

E-mail address: rekadwad@gmail.com (B.N. Rekadwad).

data serves as a benchmark for to distinguish between genetically similar bacteria and for further research in phenotype based microbial diversity, microbial ecology of microorganisms and microbial systematics and taxonomy in addition to genotype data.

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Specifications Table

Subject area	<i>Biology</i>
More specific subject area	<i>Microbiology</i>
Type of data	<i>Table, figure</i>
How data was acquired	<i>Visual, Microscope, Laboratory tests</i>
Data format	<i>Raw, analyzed</i>
Experimental factors	<i>Isolation and pure culture of microorganisms</i>
Experimental features	<i>Hydrocarbon (phenanthrine and bitumen) were used for the studies on morphological features of bacteria</i>
Data source location	<i>NCMR, NCCS, Pune (India)</i>
Data accessibility	<i>Data incorporated within this article</i>

Value of the data

- Data is given in the paper help to describe the morphological features and diversity of bacteria.
- Data presented in this paper acts as key features for determining novelty of species if microorganism showing more genomic similarity i.e. for taxonomic categorization and classification of bacteria.
- Data generated serves as the benchmark for further research in microbial diversity, microbial ecology of microorganisms and microbial systematic and taxonomy.

1. Data

The data described in this paper highlights morphological features of halophilic bacteria (morphotypes). Bacterial species and their pigmented morphotypes were isolated from oil studded soil, salt marsh and offshore samples (A, A7, CSM, CB and CM) collected along the West coastline in Goa (India) i.e. Arambol beach, Calangate beach, Candolim beach and Colva beach on Zobell Marine agar, R2A agar, Mannitol salt agar and Blood agar. Isolated bacterial colonies showing diverse morphological features were chosen for further study. Selected bacteria were sub-cultured and pure cultures are stored in refrigerator at 4 °C on continuous cycle. Isolated halophiles have optimum temperature 22 ± 2 °C. All isolates luxuriant growth in the presence of 20% salt concentration. Morphological features were recorded as per Bergey's Manual of Systematic Bacteriology and the International Code of Nomenclature of Bacteria (ICNB).

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