A Big Earth Data Platform for Three Poles

**Bacteria strain resource database of the Tibetan Plateau (version 1.0) (2010-2018)**

1、Description

The glacial bacterial resource database of the Tibetan Plateau provides the bacterial 16S ribosomal RNA gene sequences of several glaciers, which are seven glaciers of the Tibetan Plateau separated by an experimental group led by Yongqin Liu during 2010 to 2018 (East Rongbuk Glacier of Mt. Qomolangma, Tianshan Glacier No.1, Guliya Glacier, Laohugou Glacier, Muztagh Ata Glacier, Qiyi Glacier and Yuzhufeng Glacier), the Malan Glacier separated by Shurong Xiang and the Puruogangri Glacier separated by Xinfang Zhang. After the glacier samples were collected, they were taken to the Ecological Laboratory of the Institute of Tibetan Plateau Research of the Chinese Academy of Sciences in Beijing and the National Cryosphere Laboratory in Lanzhou. After applying the spread plate method, the samples were cultured at different temperatures (4-25 °C) for 20 days to 90 days, and single colonies were picked out for purification. After the DNA was extracted from the isolated bacteria, the 16S ribosomal RNA gene fragment was amplified with 27F/1492R primer and sequenced using the Sanger method. The 16S ribosomal RNA gene sequence was compared with the RDP database using the "Classifier" software and identified as level one when the reliability exceeded 80%.
These data contain the 16S ribosomal RNA gene fragment sequence and glacier sources of each sequence. Compared with sequences based on high-throughput sequencing, these data have a longer sequence and more accurate classification and can better serve in glacier microbiology research.

2、Keywords

Theme：Biological Resources,Bacterial species,Glacier(Ice Sheet)
Discipline：Human-nature Relationship,Cryosphere
Places：Guliya Glacier, Yuzhufeng Glacier, Tibetan Plateau , Qiyi Glacier, Qiyi Glacier, Tianshan Glacier No.1, East Rongbuk Glacier of Mt. Qomolangma, Muztagh Ata GlacierLaohugou Glacier,
Time：2010-2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：1.0MB

4.Data format：txt

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：43.11666667 | - |
| west：75.05 | - | east：97.75 |
| - | south：27.98333333 | - |

5、Time frame:2010-01-13 00:00:00+00:00--2018-04-12 00:00:00+00:00

6、Reference method

References to data:

JI Mukan. Bacteria strain resource database of the Tibetan Plateau (version 1.0) (2010-2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Ecolo.tpdc.2700742018

References to articles:

7、Supporting project information

CASEarth:Big Earth Data for Three Poles（grant No. XDA19070000）

8、Data resource provider

name: JI Mukan
unit: Institute of Tibetan Plateau Research, Chinese Academy of Sciences
email: jimukan@itpcas.ac.cn