

Bacterial diversity in bentonites, engineered barrier for deep geological disposal of radioactive wastes

Microbial Ecology

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Online Resource 7 Affiliation of the 16S rRNA gene sequences of BIV-2 bacterial clones

| Clone | Accession no. EMBL | no. of clones | Closest phylogenetic relative/accession no. | % similarity | Isolation source |
|-----------------------------------|--------------------|---------------|--|--------------|------------------------------|
| <i>Alphaproteobacteria</i> | | | | | |
| BIV-2-56 | HG970707 | 2 | <i>Erythrobacter aquimaris</i> g3 (JQ661145) | 96 | soil |
| BIV-2-64 | HG970708 | 3 | Uncultured <i>Sphingomonadales</i> bacterium CTRL51 (EU404009) | 98 | surface clean water |
| BIV-2-15 | LK023654 | 1 | Uncultured <i>Sphingomonadaceae</i> bacterium t281c10 (HM438325) | 99 | soil with anthracene |
| BIV-2-22 | LK023655 | 1 | Uncultured <i>Brevundimonas</i> sp. S110 (KF003174) | 96 | grass carp gut mucus |
| BIV-2-34 | LK023659 | 1 | Uncultured <i>Hyphomicrobiaceae</i> bacterium (FR681863) | 98 | geothermal microbial mats |
| BIV-2-41 | LK023663 | 1 | Uncultured <i>Caulobacterales</i> bacterium (FN689613) | 97 | rhizosphere of tomato plants |
| BIV-2-58 | LK023670 | 1 | <i>Devosia</i> sp. R-36756 (FR691413) | 99 | Forlidas Pond, Antarctica |
| BIV-2-59 | LK023671 | 1 | <i>Rubellimicrobium aerolatum</i> (AB682444) | 97 | - |
| BIV-2-71 | LK023679 | 1 | <i>Sphingomonas</i> sp. LRR22 (JX138997) | 99 | soil of a red pool |
| BIV-2-78 | LK023683 | 1 | <i>Brevundimonas</i> sp. W24 (KF560390) | 99 | soil from military site |
| BIV-2-81 | LK023685 | 1 | Uncultured <i>Mesorhizobium</i> sp. OUT12 (EU372810) | 99 | agriculture waste compost |
| BIV-2-86 | LK023687 | 1 | <i>Altererythrobacter</i> sp. CC-VAM-21 (KC169804) | 98 | marine sediment |
| BIV-2-102 | LK023697 | 1 | Uncultured <i>Sphingomonas</i> sp. Wbfc21 (KC138682) | 99 | saffron bulk soil |
| <i>Betaproteobacteria</i> | | | | | |
| BIV-2-5 | HG970709 | 2 | <i>Herbaspirillum</i> sp. 9NM-7 (JQ608329) | 98 | lead-zinc ore tailings |
| BIV-2-23 | HG970710 | 10 | <i>Herbaspirillum</i> sp. 9NM-7 (JQ608329) | 99 | lead-zinc ore tailings |
| BIV-2-30 | HG970711 | 2 | <i>Variovorax</i> sp. C6d1 (AB552894) | 99 | Algal-bacterial consortia |
| BIV-2-31 | HG970712 | 2 | Uncultured <i>Variovorax</i> sp. 4.6h17 (JN679121) | 98 | membrane bioreactor |
| BIV-2-35 | LK023660 | 1 | <i>Herbaspirillum</i> sp. THG-e31 (KF314195) | 99 | soil |
| BIV-2-49 | LK023667 | 1 | Uncultured <i>Burkholderiales</i> bacterium 49-1_5 (FJ517712) | 95 | epithelium |
| BIV-2-52 | LK023668 | 1 | <i>Methylibium</i> sp. T2-YC6780 (GQ369048) | 99 | rhizosphere of a rice field |

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| BIV-2-66 | LK023676 | 1 | <i>Variovorax</i> sp. Van34 (HQ222271) | 99 | enrichment culture with nitrate |
| BIV-2-74 | LK023680 | 1 | Uncultured <i>Methylophilus</i> sp. Acro220 (KC110974) | 99 | soil microcosm |
| BIV-2-90 | LK023689 | 1 | Uncultured <i>Polaromonas</i> sp. R77 (JQ861817) | 94 | groundwater with diesel |
| BIV-2-104 | LK023699 | 1 | <i>Herbaspirillum</i> sp. THG-e31 (KF314195) | 99 | soil |
| BIV-2-108 | LK023701 | 1 | Uncultured beta proteobacterium P-R68 (JN038855) | 98 | Chongxi wetland soil |
| <i>Deltaproteobacteria</i> | | | | | |
| BIV-2-25 | HG970713 | 5 | Uncultured delta proteobacterium SNNP_2012-102 (JX114435) | 99 | Sierra Nevada NP soil |
| BIV-2-61 | LK023673 | 1 | Uncultured delta proteobacterium KCM-C-14 (AJ581623) | 97 | Soil sample |
| <i>Gammaproteobacteria</i> | | | | | |
| BIV-2-65 | HG970714 | 2 | Uncultured <i>Thermomonas</i> sp. EHFS1_S15a (EU071527) | 99 | ESTEC HYDRA facility |
| BIV-2-37 | LK023661 | 1 | Uncultured gamma proteobacterium 33F (JN178912) | 99 | Kartchner Caverns, AZ |
| BIV-2-55 | LK023669 | 1 | Uncultured Xanthomonadaceae bacterium L1-20 (JF703511) | 98 | root and rhizosphere soil |
| BIV-2-63 | LK023675 | 1 | Uncultured <i>Rhizobacter</i> sp. SNNP_2012-9 (JX114342) | 99 | Sierra Nevada NP soil |
| <i>Actinobacteria</i> | | | | | |
| BIV-2-16 | HG970717 | 2 | Uncultured actinobacterium 1E1 (KC442672) | 99 | soil |
| BIV-2-2 | LK023645 | 1 | <i>Nocardioides</i> sp. M79 (KC464843) | 99 | forest rhizosphere |
| BIV-2-8 | LK023649 | 1 | Uncultured <i>Aciditerrimonas</i> sp. D.an-164 (JX505231) | 97 | soil |
| BIV-2-9 | LK023650 | 1 | Uncultured <i>Micrococcineae</i> bacterium MLS194 (JX240871) | 99 | coastal soil |
| BIV-2-12 | LK023653 | 1 | Uncultured actinobacterium HG-B01170 (JN409119) | 98 | rhizosphere soil of cucumber |
| BIV-2-27 | LK023657 | 1 | Uncultured actinobacterium BPS_L377(HQ857735) | 98 | Soils with hydrocarbon |
| BIV-2-60 | LK023672 | 1 | Uncultured actinobacterium HG-B01170 (JN409119) | 99 | rhizosphere soil of cucumber |
| BIV-2-76 | LK023681 | 1 | Uncultured actinobacterium g43 (EU979052) | 95 | soil |
| BIV-2-77 | LK023682 | 1 | Uncultured actinobacterium E1B-A4-114 (EF016798) | 99 | soil |
| BIV-2-94 | LK023692 | 1 | Uncultured actinobacterium 500M2_B5 (DQ514194) | 99 | newly deglaciated soil |
| BIV-2-97 | LK023695 | 1 | Uncultured actinobacterium HG-B01170 (JN409119) | 99 | rhizosphere soil of cucumber |
| BIV-2-99 | LK023696 | 1 | Uncultured actinobacterium E1B-A4-114 (EF016798) | 98 | soil |

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| BIV-2-105 | LK023700 | 1 | Uncultured <i>Sporichthyaceae</i> bacterium C.la-103 (JX504987) | 97 | soil |
| | | | <i>Acidobacteria</i> | | |
| BIV-2-6 | LK023647 | 1 | Uncultured <i>Acidobacteria</i> bacterium HG-B0245 (JN409164) | 99 | rhizosphere soil of cucumber |
| BIV-2-42 | LK023664 | 1 | Uncultured <i>Acidobacteria</i> bacterium SeqSEEZ177 (JN367197) | 100 | soil |
| BIV-2-62 | LK023674 | 1 | Uncultured <i>Acidobacteria</i> bacterium SEG_08_567 (HQ729801) | 99 | grassland soil |
| BIV-2-67 | LK023677 | 1 | Uncultured <i>Acidobacteria</i> bacterium SEG_08_326 (HQ597906) | 97 | grassland soil |
| BIV-2-70 | LK023678 | 1 | Uncultured <i>Acidobacteria</i> bacterium AEG_08_306 (HQ597242) | 99 | grassland soil |
| BIV-2-89 | LK023688 | 1 | Uncultured <i>Acidobacteriales</i> bacterium Plot4-2C07 (EU449659) | 100 | agricultural soil |
| BIV-2-92 | LK023690 | 1 | Uncultured <i>Acidobacteria</i> bacterium AEW_08_616 (HQ598388) | 99 | woodland soil |
| BIV-2-95 | LK023693 | 1 | Uncultured <i>Acidobacteria</i> bacterium 3F5 (HQ003630) | 100 | Carrizo shallow lake |
| BIV-2-96 | LK023694 | 1 | Uncultured <i>Acidobacterium</i> sp. sw-xj145 (GQ302579) | 98 | cold spring |
| | | | <i>Bacteroidetes</i> | | |
| BIV-2-1 | HG970705 | 2 | Uncultured <i>Bacteroidetes</i> bacterium LJ-B48 (JF319169) | 95 | rhizosphere soil |
| BIV-2-18 | HG970706 | 4 | Uncultured <i>Bacteroidetes</i> bacterium HG-J01116 (JN408920) | 98 | rhizosphere soil |
| BIV-2-7 | LK023648 | 1 | <i>Pedobacter</i> sp. M1-27 (KC569794) | 99 | soil |
| BIV-2-11 | LK023652 | 1 | Uncultured <i>Bacteroidetes</i> bacterium UHAS5.26 (JN037900) | 99 | saline-alkaline soil |
| BIV-2-26 | LK023656 | 1 | <i>Pedobacter</i> sp. M1-27 (KC569794) | 96 | soil |
| BIV-2-32 | LK023658 | 1 | Uncultured <i>Sphingobacteria</i> bacterium SeqSEEZ223 (JN367243) | 99 | soil |
| BIV-2-38 | LK023662 | 1 | Uncultured <i>Sphingobacteria</i> bacterium SeqSEEZ223 (JN367243) | 99 | soil |
| BIV-2-103 | LK023698 | 1 | Uncultured <i>Hymenobacter</i> sp. SeqSEEZ193 (JN367213) | 99 | soil |
| | | | <i>Nitrospirae</i> | | |
| BIV-2-80 | HG970715 | 2 | Uncultured <i>Nitrospirae</i> bacterium DM2-139 (KC172193) | 99 | ginger cropping soil |
| BIV-2-48 | LK023666 | 1 | Uncultured <i>Nitrospira</i> sp. fjc-17 (JQ278765) | 99 | groundwater |
| | | | <i>Planctomycetes</i> | | |
| BIV-2-98 | HG970716 | 2 | Uncultured <i>Planctomyces</i> sp. N-111 (HM565043) | 96 | concrete |
| BIV-2-10 | LK023651 | 1 | Uncultured Planctomycetales bacterium LIM15 (HM241109) | 98 | limestone rock |

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| | | | <i>Cyanobacteria</i> | | |
| BIV-2-3 | LK023646 | 1 | <i>Leptolyngbya scottii</i> EcFYyyy_00 (KC463191) | 99 | Soil Crust |
| BIV-2-93 | LK023691 | 1 | <i>Leptolyngbya frigida</i> ANT.L52B.3 (AY493612) | 99 | Antarctica |
| | | | <i>Gemmatimonadetes</i> | | |
| BIV-2-85 | LK023686 | 1 | Unc. <i>Gemmatimonadetes</i> bacterium HG-B02245 (JN409277) | 99 | rhizosphere soil of cucumber |
| | | | unknown | | |
| BIV-2-79 | LK023684 | 1 | Uncultured bacterium AC14C1CF08 (JQ427104) | 99 | soil |
| BIV-2-44 | LK023665 | 1 | Uncultured bacterium AN1C2AF10 (JQ428809) | 100 | soil |
