Supplemental Table S1. Classification of the Archaea Domain according to Bergey´s Manual, 2012; Liu X. *et al*., 2018; Baker *et al*., 2020.

|  |  |  |
| --- | --- | --- |
| **Superphylum/Phylum** | **Class** | **Order** |
| Superphylum Asgard |  |  |
| Phylum Lokiarchaeota\*  (MBG-B, DSAG) |  |  |
| Phylum Odinarchaeota |  |  |
| Phylum Thorarchaeota \* |  |  |
| Phylum Heimdallarchaeota\* |  |  |
| Superphylum DPANN |  |  |
| Phylum Diapherotites\*  (pMC2A384) |  |  |
| Phylum Parvarchaeota |  |  |
| Phylum Aenigmarchaeota\* |  |  |
| Phylum Nanoarchaeota\* |  |  |
| Phylum Nanohaloarchaeota |  |  |
| Phylum Micrarchaeota  (ARMAN-1 y -2) |  |  |
| Phylum Pacearchaeota\* |  |  |
| Phylum Woesearchaeota\* |  |  |
| Phylum Altiarchaeota\*  (SM1) |  |  |
| Phylum Huberarchaeota |  |  |
| Superphylum TACK |  |  |
| Phylum Thaumarchaeota\*  (MG-I, MBG-A) |  |  |
| PhylumA igarchaeota\*  (HWCG-I) |  |  |
| Phylum Crenarchaeota\* | Thermoprotei | Thermoproteales  Desulfurococcales  Sulfolobales  Acidilobales  Fervidicoccales |
| Phylum Korarchaeota |  |  |
| Phylum Bathyarchaeota\*  (MCG) |  |  |
| Phylum Geoarchaeota\* |  |  |
| Phylum Geoarcheota  (NAGI) |  |  |
| Phylum Geothermarchaeota |  |  |
| Phylum Marsarchaeota  (NAG2) |  |  |
| Phylum Nezhaarchaeota |  |  |
| Phylum Verstraetearchaeota |  |  |
| Phylum AI Crenarchaeota |  |  |
| Phylum AII Euryarchaeota |  |  |
|  | Methanopyri\* | Methanopyrales |
|  | Methanobacteria\* | Methanobacteriales |
|  | Methanococci\* | Methanococcales  Methanomicrobiales  Methanosarcinales |
|  | Methanomicrobiota\* |  |
|  | Methanonatronarchaeia |  |
|  | Halobacteria\* | Halobacteriales |
|  |  | Methanocellales |
|  | Thermococci\* | Thermococcales |
|  | Thermoplasmata\* | Thermoplasmatales |
|  | Archaeoglobi\* | Archaeoglobales |
|  | Aciduliprofundum\* |  |
|  | Poseidoniales  (Marine Group II) |  |
|  | Pontarchaea  (Marine Group III) |  |
|  | Hadesarchaea \*  (SAGMEG) |  |
|  | Theionarchaea\* (Z7ME43) |  |
|  | Hydrothermarchaeota (MBG-E) |  |

**\***Secuences reported in estuaries (Liu *et al*., 2018)