Table S1. PCR primers and conditions for screening of archaeal single amplified genomes (SAGs).

Primer	Sequence (5′ → 3′)	Annealing temp (°C)	Gene	Metabolic process	Reference
SSU rRNA PCR primers					
parch_519F	CAGCMGCCGCGGTAA	50	SSU rRNA	NA	Ovreas *et al.*, 1997
Arch_915R	GTGCTCCCCCGCCAATTCCT				DeLong, 1992
Arch_345F	CCTAYGGGGYGCASCAG	57	SSU rRNA	NA	Gantner *et al.*, 2010
Arch_1000R	GGCCATGCACYWCYTCTC				
Metabolic gene PCR primers					
Arch-amoAF	STAATGGTCTGGCTTAGACG	50	*amoA*	Ammonia oxidation	Francis *et al.*, 2005
Arch-amoAR	GCGGCCATCCATCTGTATGT				
NirKMF	CCWGGWCCAACHYTDAGA	50	*nirK*	Nitrite reduction	This study
NirkMR	ATTTCWCCDACAAYRTG				
nifHF	GGHAARGGHGGHATHGGNAARTC	55	*nifH*	Nitrogen fixation	Mehta *et al.*, 2003
nifHR	GGCATNGCRAANCCVCCRCANAC				

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