

Correction

Correction: A Comprehensive Evaluation of PCR Primers to Amplify the *nifH* Gene of Nitrogenase

**The PLOS ONE Staff**

The sequence for primer R6 given in Table 2 is incorrect. Please see the correct Table 2 below.

Citation: The PLOS ONE Staff (2014) Correction: A Comprehensive Evaluation of PCR Primers to Amplify the *nifH* Gene of Nitrogenase. PLoS ONE 9(3): e93883. doi:10.1371/journal.pone.0093883

Published: March 28, 2014

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Table 2. Properties of universal primers and their coverage for phylogenetic and environmental groupings in the nifH database; continued from Table 1.

Primer ^d	Name	Pos. ^e	Deg. ^f	T _m (°C)	nifH ^a (%)										Specific groupings ^b (%)					Environ. ^c (%)					Ref. ^g
					0	1	2	Pr	Cy	III	IA	Fr	Pb	Ep	IV	Soil	Mat	Sea							
ATGGCATGCRRAICICRCAIAC	VCG	394-419	4)	73.9-76.7	93	98	99	93	94	94	94	95	98	90	96	33	91	96	91	96	91	[45]			
TGGGCVTTGTTTCRCGGATYGGCAT	nifHRc	412-437	16	69.1-74.2	11	34	51	18	0	0	11	0	13	0	0	0	12	3	9	3	9	[24]			
TGSGCVTTGTCYTCRCGGATBGGCAT	nifHRb	412-437	48	70.0-76.0	0	33	56	1	0	0	0	0	0	0	0	0	1	0	0	0	0	[24]			
SACGATGTAGATPTCCTG	PcenoR436	436-453	4	NA	34	60	83	51	10	24	13	97	97	7	1	3	36	28	22	22	22	[49]			
GCC ATC ATY TCI CCI GA	R6	457-473	2	61.1-62.5	96	97	99	97	99	86	99	99	99	102	97	15	94	99	99	97	97	[18]			
ATSGCCATCATYTCRCGGA	polR	457-476	8	63.7-67.5	35	63	86	36	15	19	40	90	90	23	12	0	55	7	2	2	2	[20]			
ADNGCCATCATYTCNCC	nifH1	460-476	96	52.5-63.9	94	99	99	94	96	91	96	99	99	103	80	13	91	98	87	87	87	[16]			
ADWGCCATCATYTCRCC	nifH22	460-476	24	53.2-60.9	17	89	98	16	23	21	22	1	49	20	3	11	31	31	36	36	36	[51]			
ANDGCCATCATYTCNCC	nifH2-ZANI ⁱ	460-476	96	52.5-63.6	54	98	99	98	88	70	73	11	83	83	10	63	61	61	76	76	76	[46]			
TANANNGCCATCATYTCNCC	470	460-479	512	53.8-65.7	80	82	98	84	43	62	88	99	80	98	9	79	6	6	95	95	95	[20]			
GCRTAIBNGCCATCATYTC	nifH-univ-463r	463-482	48	55.7-63.8	85	87	88	91	50	62	91	99	88	99	8	93	83	83	72	72	72	[43]			
GCRTAIIIGCCATCATYTC	Emino	463-482	4	60.2-63.4	86	87	88	91	50	64	91	99	88	100	8	93	83	83	76	76	76	[20]			
ATGATGGCSATGTAYGCSGSAACAA	nifHR-2 ⁱ	466-491	16	70.0-71.7	49	58	87	36	17	35	53	99	60	58	0	72	100	100	4	4	4	[24]			
TGTTGSGGCRATCATSGCCATCAT	nifHR	466-491	16	70.0-71.7	49	58	87	36	17	35	53	99	60	58	0	72	100	100	4	4	4	[27]			
TGTTGGGCGCRTASAKIGCCAT	nifH-3r	469-491	8	68.5-72.1	48	89	94	66	7	39	72	4	30	44	3	77	100	100	0	0	0	[19]			
ATRRTRTTNGNGCRTA	nifH3	494-478	128	46.1-61.5	94	95	98	93	96	86	88	100	78	93	50	93	100	100	100	100	100	[46]			
YAAAATRRTRTTNGNGCRTA	YAA-poly ^j	478-497	256	49.5-63.5	1	12	51	0	0	7	1	0	0	0	5	0	0	0	0	0	21	[20]			
CAGATCAGVCCGCCSAGRGIMAC	RL25	532-554	24	67.5-74.1	4	29	61	5	0	8	1	0	0	0	0	1	0	0	0	0	0	[50]			
GGCACGAAGTGGATCAGCTG	primer-r	619-638	1	64.3	4	16	43	3	0	24	0	0	0	0	29	0	0	0	0	0	0	[47]			
GCTACTACTYTCGCCSGA	AMR-R				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	[27]			

^aData indicate primer binding to all *nifH* sequences in the database with 0, 1, and 2 mismatches allowed. In some cases highly degenerate primers bind to multiple positions in the sequence generating coverage values that exceed 100%.

^bData indicate primer binding to specific groupings in the *nifH* phylogeny. Abbreviations are as follows: Alpha, Beta, and Gamma Proteobacteria (Pr); Cyanobacteria (Cy); Cluster III (III); Cluster IA (IA); Paenibacillus (Pb); Frankia (Fr); Epsilon Proteobacteria Containing Cluster (Ep); paralogous sequences in Cluster IV (IV).

^cPrimer coverage queried against sequences recovered from specific environments (Environ.) as described in methods. Environments include: soils (Soil), microbial mats (Mat), and pelagic marine samples (Sea).

^dSequences are given in the 5' to 3' direction. IUPAC characters are used, and I = Inosine.

^ePosition is relative to *A. vinelandii* *nifH* (Genbank ACCN# M20568).

^fDegeneracy is given as the number of oligonucleotides that comprise the primer.

^gReferences in which the primers are described.

^hWe altered these primer names in order to distinguish them from primers with similar name and sequence composition that originate from other sources.

NA: Data not available as described in Methods.

doi:10.1371/journal.pone.0042149.t002

Reference

1. Gaby JC, Buckley DH (2012) A Comprehensive Evaluation of PCR Primers to Amplify the *nifH* Gene of Nitrogenase. *PLoS ONE* 7(7): e42149. doi:10.1371/journal.pone.0042149