

## Supplementary material

Table I: Oligonucleotide probes used for microbial quantification by fluorescence in situ Hybridization

Probe	Target microbial Group	Sequence (5'-3')	FA	NaCl	Reference
ARCH 915	Archaea domain	GTGCTCCCCGCAATTCCT	20	225	Stahl et al. (1991)
LGC 354 A		TGGAAGATTCCTACTGC			
LGC 354 B	Firmicutes phylum	CGGAAGATTCCTACTGC	35	80	Meier et al. (1999)
LGC 354 C		CCGAAGATTCCTACTGC			
HCG 236	Actinobacteria phylum	AACAAGCTGATAGGCCGC	30	112	Erhart et al. (1997)
ACIDO 228	Acidobacteria phylum	TAATCDGCCGCGAMCYCCT	35	80	Neef et al. (1995)
ALF 968	Alpha-proteobacteria class	GGTAAGGTTCTGCGTTT	30	112	Manz et al. (1992)
BET 42 a	Beta-proteobacteria class	GCCTTCCCCTTCGTTT	30	112	Daims et al. (2001)
GAM 42 a	Gamma-proteobacteria class	GCCTTCCACATCGTTT	30	112	Daims et al. (2001)
EPSY 549	Epsilon-proteobacteria class	CAGTGATCCGAGTAACG	30	112	Manz et al. (1996)
EUB 338 III	Verrucomicrobiales order	GCTGCCACCCGTAGGTGT	30	112	Lin et al. (2006)
	Bacteroidetes:				
BAC 303	The most Bacteroidaceae, some Prevotellaceae, some Porphyromonadaceae	CCAATGTGGGGGACC	40	56	Kleinstеuber et al. (2008)
	The most Flavobacteria,				
CF 319 a	some Bacteroidetes, some Phingobacteria	TGGTCCGTGTCTCAGTAC	35	80	Kleinstеuber et al. (2008)
MUT 590	Streptococcus mutans	ACTCCAGACTTTCCTGAC	30	112	Trebesius et al. (2000)
SOB 174	Streptococcus sobrinus	TAACTCCTCTTATGCGG			
Aero 2	Some Aeromonas	GTAACGTCACAGCCAGCAGA	35	80	Kyselková et al. (2009)
RUMs 278	Ruminococcaceae	GTCCGGCTACCGATCGCG	20	225	Xia et al. (2011)
	The most Clostridium				
Chis 150	histolyticum (Clostridium cluster I/II)	TTATGCGGTATTAATCTYCCTTT	30	112	Franks et al. (1998)

Pint 649	<i>Prevotella intermedia</i>	GCCGCCRCTGAASTCAAGCC	40	56	Gmür et al. (2002)
Pnig 657	<i>Prevotella nigrescens</i>	TCCGCCTGCGCTGCGTGTA			
Bif 164	<i>Bifidobacterium</i> spp.	CATCCGGCATTACCACCC	20	225	Langendijk et al. (1995)
Lacto 39	<i>Lactobacillus</i>	TCTGTTAGTTCCGCTCGCTC	30	112	Demaneche et al. (2008)
Lacto 15		GAAGTCGCGAGGCTAAGC			Behr et al. (2000)
Enc 1259	<i>Enterococcus</i> spp.	TCCATCAGCGACACCCGAAA	35	80	Demaneche et al. (2008)
Enter 2	<i>Enterococcus</i>		35	80	
Efs 129	<i>Enterococcus faecalis</i>	CCCTCTGATGGGTAGGTT	35	80	Behr et al. (2000)
Eco 1167	<i>Escherichia coli</i>	GCATAAGCGTCGCTGCCG	40	56	Neef et al. (1995)
	Bacteroides:				
B/TAFO	<i>Tannerella forsythensis</i> ( <i>Bacteroides forsythus</i> )	CGTATCTCATTTTATTCCCCTGTA	30	112	Sunde et al. (2003)
Bfrag 602	<i>Bacteroides fragilis</i> group	GAGCCGCAAACCTTTCACAA	30	112	Franks et al. (1998)
Bfrag 998	<i>Bacteroides fragilis</i>	GTTTCCACATCATTCCTG	30	112	Rigottier et al. (2003)

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FA: formamide concentration in hybridization buffer; Sodium chloride concentration in washing buffer.