

Supplementary Table 2. Comparison of DNA polymerase sensitivity and specificity. PFU Turbo HotStart out-performed LA-TaKaRa in 13 virus samples (blue), while the opposite held for one microbial sample (orange). However, the sensitivity comes at a cost, as PFU 'no template control' amplified at 30 and 35 cycles (red), while TaKaRa did not. All samples had been subjected to the LA protocol through ligation to Linker A and amplification (Supp. Table 1). **+**, amplification confirmed by strong band in post-PCR gel; **-**, no detectable amplification; **±**, faint band indicating small degree of amplification; n.d., no data. ⁺⁺microbial samples were sheared by nebulization, rather than Covaris; ^{**}below detection limit of PicoGreen assay, which in practice is 1-5 pg.

Sample	Starting DNA (pg/μl)	20 cycles		25 cycles		30 cycles		35 cycles	
		PFU	TAK	PFU	TAK	PFU	TAK	PFU	TAK
Tara #23 DCM 1:100	229	+	+	+	+	+	+	+	+
Tara #30 DCM 1:100	1495	+	+	+	+	+	+	+	+
Fitzroy viral 1:100	1.9	+	+	+	+	+	+	+	+
Dunk viral 1:100	4.9	+	+	+	+	+	+	+	+
Sept/09 B2O micro (16S) 1:100 ⁺⁺	17.4	+	+	+	+	+	+	+	+
Aug/09 P26 10m	< 1 ^{**}	+	+	+	+	+	+	+	+
Jun/09 P26 10m	< 1	+	+	+	+	+	+	+	+
Trial 1 Jun/09 P4 10m 1:10	855	+	+	+	+	+	+	+	+
Jun/08 P26 10m	6.3	-	-	±	±	+	+	+	+
Feb/09 P26 1000m	6	-	-	+	±	+	+	+	+
Jun/09 P4 500m	2.2	-	-	+	±	+	+	+	+
Jun/09 P12 2000m	< 1	-	-	-	-	+	-	+	+
Dec/09 Line67 Open DCM	872	+	+	+	+	+	+	+	+
Apr/09 SIO Rep 3-NT	175	±	±	+	+	+	+	+	+
No Template Control	n.a.	-	-	-	-	+	-	+	-
Trial 2 TUSD #20 1:30	< 1	-	-	+	-	+	+	+	+
TUSD #20 1:300	< 0.1	-	-	-	-	+	±	+	+
TUSD #23 1:30	80.4	-	-	±	-	+	+	+	+

	TUSD #23 1:300	8.4	-	-	-	-	+	-	+	+
	Jun/08 P26-10m	< 1	-	-	+	-	+	+	+	+
	Feb/09 P26 2000m	3.7	-	-	+	-	+	+	+	+
	Aug/08 P26 10m	< 1	-	-	+	-	+	+	+	+
	Aug/08 P26 1000m	< 1	-	-	-	-	+	±	+	+
	Feb/09 P26 10m	3.2	-	-	+	±	+	+	+	+
	Jun/08 P26 2000m	< 1	-	-	-	-	+	-	+	+
	<i>No Template Control</i>	n.a.	-	-	-	-	-	-	-	-
Trial 3	Sept/09 B2 micro (16S)	28	-	±	n.d.	+	-	+	-	+
	Jun/10 SIO micro 1:100 (16S)	638	-	-	±	±	+	+	+	+
	Jun/10 SIO micro 1:1000 (16S)	1.9	-	-	-	-	±	±	+	+
	Dec/09 Fitzroy micro 1:10	2900	+	+	+	+	+	+	+	+
	Dec/09 Dunk micro 1:200	1220	+	+	+	+	+	+	+	+
	<i>No Template Control</i>	n.a.	n.d.	n.d.	-	-	n.d.	n.d.	-	-
Trial 4	TUSD phage mix (n = 2)	100000	n.d.	n.d.	+	+	+	+	+	+
	TUSD phage mix (n = 2)	10000	n.d.	n.d.	+	+	+	+	+	+
	TUSD phage mix (n = 2)	3300	n.d.	n.d.	±	+	+	+	+	+
	TUSD phage mix (n = 2)	1000	n.d.	n.d.	-	±	+	+	+	+
	TUSD phage mix (n = 2)	200	n.d.	n.d.	-	-	±	+	+	+
	<i>No Template Control</i>	n.a.	n.d.	n.d.	-	-	-	-	-	-