

- 1 **Table S1.** Bias between nominal and measured concentrations the highest concentration of
- 2 standard from each manufacturer

Standard	BioRad	RainDance	Altona	Abbott	Qiagen
	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(cp/ml)</sub> (SD)
AcroMetrix	-0.55 (0.07)	-0.64 (0.07)	0.17 (0.08)	-0.21 (0.06)	-0.58 (0.02)
SeraCare	0.22 (0.01)	0.37 (0.41)	0.71 (0.06)	-0.15 (0.14)	0.29 (0.07)
ZeptoMetrix	-1.04 (0.06)	-1.07 (0.22)	-0.75 (0.12)	-0.89 (0.11)	-0.29 (0.002)

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5 **Table S2.** Bias between nominal and measured concentrations the second highest concentration  
 6 of standard from each manufacturer

Standard	BioRad	RainDance	Altona	Abbott	Qiagen
	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(cp/ml)</sub> (SD)
AcroMetrix	-0.34 (0.16)	-0.52 (0.10)	0.15 (0.13)	-0.08 (0.12)	-0.63 (0.03)
SeraCare	0.26 (0.06)	0.07 (0.08)	0.43 (0.13)	0.08 (0.09)	0.19 (0.04)
ZeptoMetrix	-1.05 (0.15)	-1.18 (0.24)	-0.60 (0.04)	-0.93 (0.17)	-0.36 (0.10)

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10 **Table S3.** Bias between nominal and measured concentrations the lowest concentration of  
 11 standard from each manufacturer.

Standard	BioRad	RainDance <sup>a</sup>	Altona	Abbott	Qiagen
	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(IU/ml)</sub> (SD)	Mean <sub>log10(cp/ml)</sub> (SD)
AcroMetrix	-0.52 (0.02) <sup>b</sup>	-0.60 (0.35) <sup>b</sup>	-0.05 (0.40)	-0.04 (0.29)	-0.45 (0.04)
SeraCare	0.31 (0.20)	0.17 (0.37)	0.80 (0.17)	-0.14 (0.16)	0.24 (0.14)
ZeptoMetrix	-0.61 (0.20) <sup>b</sup>		-0.96 (0.37) <sup>b</sup>	-0.98 (0.31)	-0.34 (0.24) <sup>b</sup>

12 <sup>a</sup> No replicates detected for ZeptoMetrix from RainDance.

13 <sup>b</sup> N<4 replicates detected and used.

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17 **Table S4.** Regression parameter estimates when comparing real-time PCR measures against

18 nominal values provided by manufacturers. Regression lines were tested against the identity line.

Standard	Assay	R <sup>2</sup>	Intercept (95% CI)	P-value testing intercept=0 <sup>a</sup>	Slope (95% CI)	P-value testing slope=1 <sup>b</sup>
AcroMetrix	Abbott	0.96	0.19 (-0.29, 0.68)	0.40	0.91 (0.78, 1.05)	0.19
	Altona	0.95	-0.30 (-0.97, 0.37)	0.34	1.11 (0.92, 1.30)	0.21
	Qiagen	0.99	-0.31 (-0.52, -0.10)	<.01	0.94 (0.88, 0.99)	0.03
SeraCare	Abbott	0.96	-0.05 (-0.56, 0.46)	0.84	0.99 (0.86, 1.13)	0.91
	Altona	0.94	0.82 (0.21, 1.44)	0.01	0.95 (0.79, 1.11)	0.53
	Qiagen	0.99	0.15 (-0.13, 0.43)	0.26	1.02 (0.95, 1.10)	0.49
ZeptoMetrix	Abbott	0.95	-1.10 (-1.71, -0.49)	<.01	1.05 (0.88, 1.21)	0.54
	Altona	0.94	-1.09 (-1.87, -0.32)	0.01	1.09 (0.89, 1.29)	0.34
	Qiagen	0.98	-0.42 (-0.78, -0.06)	0.03	1.03 (0.92, 1.14)	0.58

19 <sup>a</sup> Testing whether the intercept is statistically different from 0.20 <sup>b</sup> Testing whether the slope is statistically different from 1.

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28 **Table S5.** Regression parameter estimates when comparing real-time PCR measures against the  
29 average measure made by ddPCRs. Regression lines were tested against the identity line.

Standard	Assay	R <sup>2</sup>	Intercept (95% CI)	P-value testing intercept=0 <sup>a</sup>	Slope (95% CI)	P-value testing slope=1 <sup>b</sup>
AcroMetrix	Abbott	0.95	0.57 (0.13, 1.02)	0.02	0.94 (0.80, 1.09)	0.38
	Altona	0.95	0.16 (-0.44, 0.75)	0.57	1.15 (0.95, 1.34)	0.12
	Qiagen	0.97	0.32 (-0.02, 0.67)	0.07	0.96 (0.84, 1.07)	0.40
SeraCare	Abbott	0.93	-0.07 (-0.80, 0.66)	0.83	0.93 (0.75, 1.10)	0.37
	Altona	0.97	0.68 (0.24, 1.12)	<.01	0.92 (0.81, 1.03)	0.12
	Qiagen	0.99	0.06 (-0.25, 0.37)	0.69	0.97 (0.89, 1.05)	0.41
ZeptoMetrix	Abbott	0.94	0.19 (-0.58, 0.95)	0.57	0.99 (0.75, 1.23)	0.91
	Altona	0.97	0.97 (0.49, 1.46)	<.01	0.81 (0.66, 0.96)	0.02
	Qiagen	0.99	-0.04 (-0.41, 0.34)	0.82	1.02 (0.90, 1.14)	0.68

30 <sup>a</sup> Testing whether the intercept is statistically different from 0.

31 <sup>b</sup> Testing whether the slope is statistically different from 1.

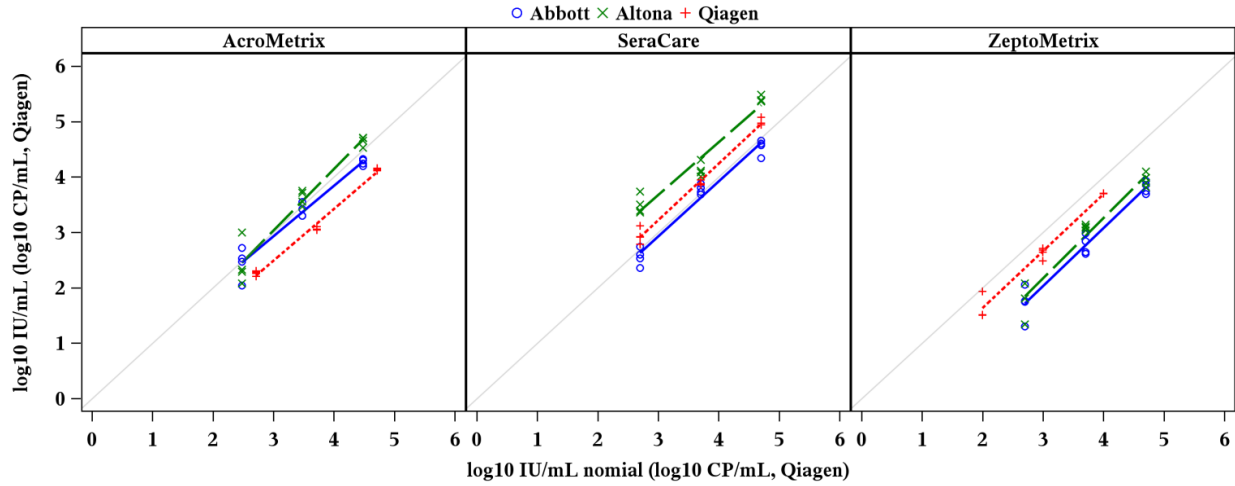
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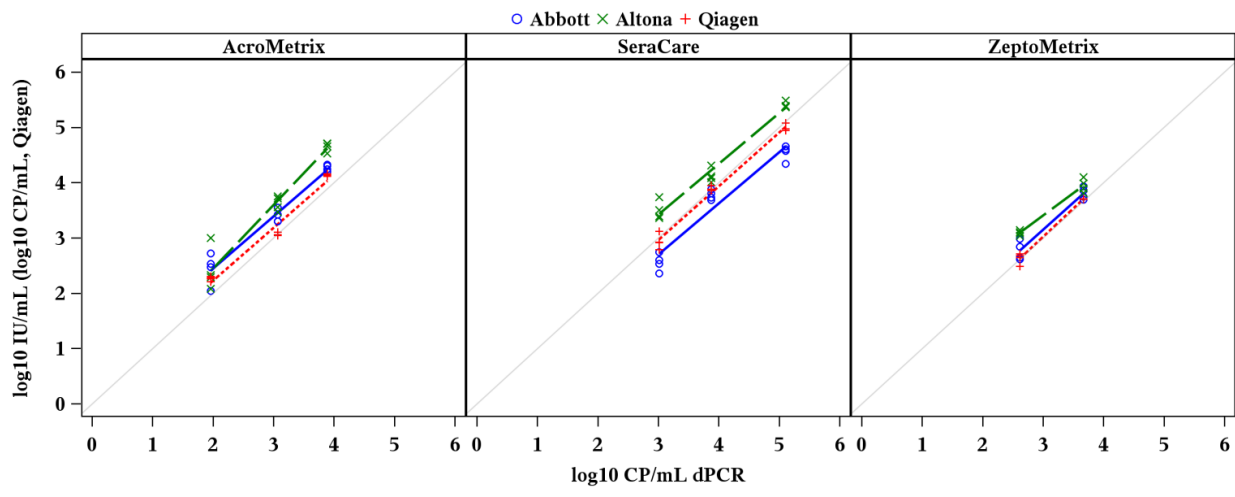
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**Figure S1.** Regression analysis of real-time PCR measures compared against nominal values stratified by standard



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**Figure S2.** Regression analysis of real-time PCR measures compared against the average ddPCR measure stratified by standard