

SUPPLEMENTAL TABLE 1. Sigma metrics from the IQC-based approach of 6-months IQC data (Jan - Jun 2017)

Item	Control level	Mean			CV (%)			Bias (%)			σ_{CLIA}			$\sigma_{WS/T}$		
		Beckman AU5800	Roche C8000	Siemens Dimension	Beckman AU5800	Roche C8000	Siemens Dimension	Beckman AU5800	Roche C8000	Siemens Dimension	Beckman AU5800	Roche C8000	Siemens Dimension	Beckman AU5800	Roche C8000	Siemens Dimension
Alb	L	24	26	24	1.8	2.2	1.6	-1.81	-0.85	-0.08	4.5	4.2	6.2	2.3 [†]	2.4 [†]	3.7
	H	40	42	39	1.5	1.5	1.1	-1.19	-0.78	0.15	5.8	6.3	9.2	3.2	3.6	5.5
ALT	L	31	28	37	2.1	3.7	3.1	0.13	0.81	8.00	9.6	5.2	3.8	7.6	4.1	2.6 [†]
	H	184	174	201	1.0	1.2	1.5	0.20	1.34	6.86	20.4	15.6	8.6	16.2	12.3	6.0
BT	L	10.0	8.8	10.9	1.9	2.9	3.1	-0.89	-3.73	11.98	35.5*	26.0*	16.7*	7.4	4.0	1.0 [†]
	H	115.3	108.3	115.9	1.4	0.9	1.7	0.02	-3.07	-2.16	14.1	18.7	10.4	10.5	13.2	7.5
Glc	L	3.4	3.3	3.5	2.1	1.8	1.7	1.20	-1.19	1.17	4.2	4.9	5.1	2.8 [†]	3.2	3.4
	H	20.8	20.4	20.7	1.9	1.7	1.3	1.77	-1.17	0.44	4.3	5.3	7.3	2.7 [†]	3.5	5.0
CREA	L	78	81	82	1.8	1.7	2.0	6.48	0.73	10.10	15.5*	18.2*	11.4*	3.1	6.4	0.9 [†]
	H	853	823	861	1.0	1.6	0.8	2.64	-0.07	6.32	12.3	9.6	11.1	9.3	7.6	7.3
Urea	L	5.10	5.03	5.20	2.4	2.6	2.9	-2.30	1.41	-0.95	7.3*	7.2*	6.3*	2.4 [†]	2.5 [†]	2.4 [†]
	H	27.10	26.84	28.03	2.1	2.4	2.0	-1.28	0.04	-0.78	3.7	3.8	4.0	3.3	3.3	3.6
K	L	2.6	2.6	2.4	1.2	1.2	0.8	0.79	0.00	-2.02	16.0*	16.7*	22.5*	4.4	5.2	4.8
	H	7.9	8.1	7.9	1.6	0.5	0.8	1.54	-0.12	-1.49	2.9* [†]	12.3*	6.3*	2.7 [†]	11.9	5.9
Na	L	114	116	115	1.0	0.7	0.7	0.23	0.06	-1.77	3.3*	5.1*	2.4* [†]	3.8	5.9	3.3
	H	158	161	158	0.9	0.5	0.6	0.04	-0.34	-1.26	2.9* [†]	4.5*	2.0* [†]	4.6	7.7	4.4
Cl	L	78	76	75	1.2	0.9	0.8	0.70	4.54	-2.77	3.7	0.5 [†]	2.7 [†]	2.8 [†]	-0.6 [†]	1.5 [†]
	H	117	117	119	1.0	0.6	0.7	0.59	1.12	-2.64	4.6	6.1	3.5	3.6	4.6	2.0 [†]
Ca	L	1.48	1.50	1.43	1.4	1.3	2.1	0.00	0.67	-1.38	12.5*	12.0*	7.7*	3.7	3.2	1.7 [†]
	H	3.29	3.34	3.17	1.2	1.2	1.3	0.92	1.52	-0.63	5.5*	5.0*	5.8*	3.4	2.9 [†]	3.5

*TEa calculated by using absolute bias to calculate σ ; not marked indicates using percentage bias to calculate σ . [†] Sigma values < 3. TEa_{CLIA} - allowable total error derived from US Clinical Laboratory Improvement Amendments 1988 (CLIA '88). TEa_{WS/T} - allowable total error derived from the People's Republic of China Health Industry Standard (WS/T403-2012). Alb - albumin, g/L. ALT - alanine aminotransferase, U/L. 37 °C. BT - bilirubin, total, $\mu\text{mol/L}$. Glc - glucose, mmol/L. CREA - creatinine, $\mu\text{mol/L}$. Urea, mmol/L. K - potassium, mmol/L. Na - sodium, mmol/L. Cl - chlorides, mmol/L. Ca - calcium, mmol/L.