

Table 1. Summary of glucose quality (weighted averages) from 5 national PT survey programs

PT Program	Labs	Group Mean	Nat. Test	Loc. Method	Nat. Method	Datasheet
AAFP 2004A	245	134.0	1.91	3.16	2.64	1
MLE M3	628	106.1	1.75	2.99	2.13	2
AAB 2nd 2004	1665	106.4	2.22	3.20	2.60	3
API 2nd 2004	3038	106.6	2.42	3.24	2.70	4
CAP LP-01 2004	5146	149.6	3.70	4.88	4.14	5
Group summary	10722	120.5	2.95	4.00	3.34	
<i>NY Benchmark</i>	412	125	3.55	4.94	4.26	6

Datasheet 1. Glucose PT results from AAFP survey 2004 Event B

CLIA allowable total error, TEa CH-7	10	%					
Instrument	Labs	Mean	SD	CV	Sig wo/B	Bias	Sig w/B
All Methods	245	134	7	5.22	1.91	NA	NA
Alfa Wasserman Ace-Alfa w Rgt	34	137	3	2.19	4.57	2.24	3.54
Biochem/ELAN ATAC 8000	34	136	6	4.41	2.27	1.49	1.93
BMC/ Roche Reflotron	30	130	8	6.15	1.63	2.99	1.14
Dade Dimension/AR/ES/RxL/Xpand	14	135	2	1.48	6.75	0.75	6.25
Roche Cobas Mira – DMA Reagent	12	137	7	5.11	1.96	2.24	1.52
Roche Cobas Mira – Roche Rgt	14	129	6	4.65	2.15	3.73	1.35
Roche Mira -Roche Rgt/MASC cal	22	132	9	6.82	1.47	1.49	1.25
Vitros DT/DTII/DT60	35	134	6	4.48	2.23	0.00	2.23
Select Alfa Wasserman Inst.	35	137	3	2.19	4.57	2.24	3.54
ATAC Instrument Group	34	136	6	4.41	2.27	1.49	1.93
Dade Instrument Group	16	135	2	1.48	6.75	0.75	6.25
Average performance figures				3.94	3.33	1.76	2.81
WEIGHTED AVERAGE PERFORMANCE	280			3.98	3.16	1.71	2.64

Datasheet 2. Glucose PT results from MLE 2004 M3 Survey CH-12

CLIA allowable Total Error, TEa		10	%			
Instrument	Labs	Mean	CV	Sig wo/B	Bias	Sig w/B
All Methods	628	106.1	5.7	1.75	NA	NA
Abaxis Piccolo	6	108.7	1.7	5.88	2.45	4.44
Abbott Aeroset	10	108.3	1.8	5.56	2.07	4.40
Chiron Diag 550 Expres	10	106.7	4.1	2.44	0.57	2.30
Beckman Synchron	53	106.8	2.2	4.55	0.66	4.25
BMC Reflotron/Plus	16	96.8	5.4	1.85	8.77	0.23
Beckman Synchron w/Carolina liq chem	5	109	5.1	1.96	2.73	1.42
Cholestech LDX	7	104	5.6	1.79	1.98	1.43
Dade Analyst	11	113.7	7.5	1.33	7.16	0.38
Dade Dimension/AR/ES/RxL/Xpa	66	108.1	2.5	4.00	1.89	3.25
DCL Roche Cobas Fara/Mira/Bio	12	103.1	3.1	3.23	2.83	2.31
Technicon RA,XT,OPERA	5	110.2	3.5	2.86	3.86	1.75
ATAC 1500, 2000, 6000	10	112.2	3.3	3.03	5.75	1.29
ATAC 8000	59	108.5	3.9	2.56	2.26	1.98
All JAC Diagnostics Instruments	7	114.6	3.4	2.94	8.01	0.58
Olympus AU	7	106.4	2.1	4.76	0.28	4.63
All Pointe Scientific/Landmark insts	11	111.6	6.8	1.47	5.18	0.71
Roche Cobas Fara/Mira/Bio	90	97	6.6	1.52	8.58	0.22
Roche Integra	12	104.2	2.1	4.76	1.79	3.91
Schiap/Alpha Wass. ACE/NexC	66	108.9	2.9	3.45	2.64	2.54
Thermo DNA Roche Cobas Fara/Mira/Bio	10	106.4	5.9	1.69	0.28	1.65
All Thermo DNA Chemistry Instruments	15	106.4	5.6	1.79	0.28	1.74
VITROS 250,400,500,700,750...	60	103.7	2.8	3.57	2.26	2.76
VITROS DT/DTII/DT60	60	110.7	4.1	2.44	4.34	1.38
Average performance figures			4.00	3.02	3.33	2.15
WEIGHTED AVERAGE PERFORMANCE	608		3.92	2.99	3.58	2.13

Datasheet 3. Glucose PT results from AAB 2004 3rd survey

CLIA allowable Total Error, TEa	10			%			
Specimen 1							
Instrument	Labs	Mean	SD	CV	Sig wo/B	Bias	Sig w/
B							
All Methods	1665	106.4	4.80	4.51	2.22	NA	NA
J&J Vitros GO	294	105.8	3.90	3.69	2.71	0.56	2.56
Pointe Sci GO	12	108.3	5.90	5.45	1.84	1.79	1.51
Roche Reflotron	21	94.5	4.60	4.87	2.05	11.18	-0.24
Sterling GO	28	105.8	3.50	3.31	3.02	0.56	2.85
Bayer Express HK	20	107.3	4.60	4.29	2.33	0.85	2.14
Beckman HK	93	106.4	2.60	2.44	4.09	0.00	4.09
Carolina HK	36	106.3	2.90	2.73	3.67	0.09	3.63
Dade Behring HK	267	108.3	2.60	2.40	4.17	1.79	3.42
DCL HK	25	106.8	5.30	4.96	2.02	0.38	1.94
Hemagen Analyst	11	110	3.80	3.45	2.89	3.38	1.92
Olympus HK	61	106.3	2.50	2.35	4.25	0.09	4.21
Roche Cobas HK	141	99.3	5.40	5.44	1.84	6.67	0.61
Roche/Hitachi HK	50	106.9	2.90	2.71	3.69	0.47	3.51
Thermo-Trace HK	30	106.3	4.10	3.86	2.59	0.09	2.57
Alfa Wasserman HK	113	108.4	3.00	2.77	3.61	1.88	2.93
DMA HK	40	109.5	5.30	4.84	2.07	2.91	1.46
Elan ATAC HK	79	108.9	4.60	4.22	2.37	2.35	1.81
JAS HK	14	118.3	7.50	6.34	1.58	11.29	-0.20
Pointe Sci HK	50	112.8	5.80	5.14	1.94	6.11	0.76
Polymedco HK	11	107.5	4.70	4.37	2.29	1.13	2.03
Beckman O2 electrode	121	105.8	2.80	2.65	3.78	0.47	3.60
Elan O2 electrode	16	104.4	2.50	2.39	4.18	1.79	3.43
Abbott i-STAT H2O2 electrode	28	97.9	1.70	1.74	5.76	9.60	0.23
Average performance figures				3.76	2.99	2.85	2.21
WEIGHTED AVERAGE PERFORMANCE	1561			3.43	3.20	2.11	2.60

Method Principles:

Glucose Oxidase (GO)

Hexokinase HK low recovery

Hexokinase HK high recovery

Oxygen electrode (O2)

Datasheet 4. Glucose PT results from API 2004 3rd Survey CH-11

CLIA allowable Total Error, TEa

10 %

Instrument	Labs	Mean	SD	CV	Sig wo/B	Bias	Sig w/B
All Methods	3038	106.6	4.4	4.13	2.42	NA	NA
Abaxis Piccolo/ Abaxis Piccolo Reagent	56	107.7	1.7	1.58	6.34	1.03	5.68
Abbott Aerosep/Abbott Aerosep reagent	25	107.8	2	1.86	5.39	1.13	4.78
Alfa Wasserman ACE, NEXCT/ mfg rgt	350	108.7	3.4	3.13	3.20	1.97	2.57
Bayer-Chiron 550 Express/ Amresco HK	21	110.4	6.8	6.16	1.62	3.56	1.04
Bayer-Chiron 550 Express/B-C 550 Exp rgt	48	106	4.8	4.53	2.21	0.56	2.08
Beckman Synchron CX/ Beckman electrode	140	107.5	2.6	2.42	4.13	0.84	3.79
Beckman Synchron CX/ Beckman HK	277	106.8	2.3	2.15	4.64	0.19	4.56
Beckman Synchron CX / Carolina rgt	39	107.6	2.3	2.14	4.68	0.94	4.24
Beckman Synchron CX / HiChem rgt	6	107	2.3	2.15	4.65	0.38	4.48
Beckman Synchron LX / Beckman electrode	42	106	2.2	2.08	4.82	0.56	4.55
Beckman Synchron LX / Beckman HK	12	105.7	2.4	2.27	4.40	0.84	4.03
Clinical Data ATAC 6000 / Clinical Data rgt	26	110.8	4.8	4.33	2.31	3.94	1.40
Clinical Data ATAC 8000 / Clinical Data rgt	267	108	3.8	3.52	2.84	1.31	2.47
Dade Dimension/ Dade rgt	512	107.4	2.7	2.51	3.98	0.75	3.68
Hemagen Analyst / Hemagen rgt	15	109.5	3.3	3.01	3.32	2.72	2.42
Nova CRT / Nova rgt	9	113.1	3.9	3.45	2.90	6.10	1.13
OCD Vitros 250-950 / OCD Vitros slide	429	104.1	3.8	3.65	2.74	2.35	2.10
OCD Vitros DT 60, 60 II /OCD Vitros slide	225	109.8	9.8	8.93	1.12	3.00	0.78
Olympus AU400, 600, 1000, 2700 /Olympus rgt	62	106.9	2.3	2.15	4.65	0.28	4.52
Poly-Chem / Polymedco HK	25	105.8	6.8	6.43	1.56	0.75	1.44
Roche Accu-Check InstantPlus /Roche rgt	5	87.4	5.8	6.64	1.51	18.01	-1.21
Roche Cobas Mira + / DCL Gluc HK-60, 300, SL...	53	105.1	4.8	4.57	2.19	1.41	1.88
Roche Cobas Mira + / DMA 1520, 1525, 7200, 7500	28	104.8	5.5	5.25	1.91	1.69	1.58
Roche Cobas Mira + / J&S rgt	7	115	1.7	1.48	6.76	7.88	1.43
Roche Cobas Mira + / JAS Diag HK	15	121.2	4.2	3.47	2.89	13.70	-1.07
Roche Cobas Mira + / Pointe Scientific HK	6	110.5	3.9	3.53	2.83	3.66	1.80
Roche Cobas Mira + / Roche rgt	162	96.6	6.2	6.42	1.56	9.38	0.10
Roche Cobas Mira + / Stanbio HK	7	104.9	3.4	3.24	3.09	1.59	2.59
Roche Cobas Mira + / Thermo Trace HK	26	105.5	4.9	4.64	2.15	1.03	1.93
Roche Hitachi / Roche rgt	40	105.9	2.4	2.27	4.41	0.66	4.12
Roche Integra / Roche rgt	80	103.2	2.8	2.71	3.69	3.19	2.51
Roche Reflotron/Plus / Roche Reflotron strips	56	98.3	5.6	5.70	1.76	10.47	-0.08
Average performance figures				3.70	3.32	3.31	2.42
WEIGHTED AVERAGE PERFORMANCE	3071			3.69	3.24	2.18	2.70

Datasheet 5. Glucose PT results from CAP 2004 Event B Specimen C-06

CLIA TEa	10						
Instrument w/B	Labs	Mean	SD	CV	Sig wo/B	Bias	Sig
All Methods	5146	149.6	4	2.7	3.70		
Beck SYN CX3-7D, CX9ALX	324	152.0	3.1	2.0	5.00	1.58	4.21
Beck SYN CX4/5CE, 7/RTS	91	154.0	3.0	1.9	5.26	2.86	3.76
Beckman Synchron CX3	37	151.8	2.5	1.6	6.25	1.45	5.34
Beckman Synchron LX20	657	150.5	2.9	1.9	5.26	0.60	4.95
Dade Behrg CIM/AR/MULT	19	151.9	3.5	2.3	4.35	1.51	3.69
Vitros 250 CHEM SYSTEM	510	145.6	3.0	2.0	5.00	2.75	3.63
Vitros 400,700 CHEM SY	52	145.6	3.4	2.3	4.35	2.75	3.15
Vitros 500,550 CHEM SY	22	145.9	2.8	1.9	5.26	2.54	3.93
Vitros 950 CHEM SYSTEM	542	145.9	2.9	2.0	5.00	2.54	3.73
Vitros DT6011 CHEM SYS	14	151.8	4.0	2.7	3.70	1.45	3.17
Dade Behrg DIM/AR/MULT	125	151.3	3.0	2.0	5.00	1.12	4.44
Roche COBAS INTEGRA	33	147.2	3.6	2.5	4.00	1.63	3.35
Abbott Aeroset	75	151.7	2.1	1.4	7.14	1.38	6.15
Bayer Advia 1650	68	152.5	3.5	2.3	4.35	1.90	3.52
Beck Syn CX3-7D,CX9ALX	72	151.6	3.6	2.3	4.35	1.32	3.77
Beck Syn CX4/5CE, 7/RTS	42	151.4	3.8	2.5	4.00	1.19	3.52
Beckman Synchron CX4/6	22	152.9	2.6	1.7	5.88	2.16	4.61
Dade Behrg Dim/AR/Mult	1127	151.5	3.0	2.0	5.00	1.25	4.37
OLY 400-640/2700/5400	246	150.8	3.3	2.2	4.55	0.80	4.18
Olympus AU 5200	21	152.0	3.8	2.5	4.00	1.58	3.37
Roche Cobas FARA/MIRA	36	145.3	7.9	5.4	1.85	2.96	1.30
Roche Cobas INTEGRA	342	147.4	3.7	2.5	4.00	1.49	3.40
Roche Modular	177	148.1	3.1	2.1	4.76	1.01	4.28
Roche/Hitachi 717	17	153.5	2.7	1.8	5.56	2.54	4.14
Roche/Hitachi 747	35	147.7	3.3	2.2	4.55	1.29	3.96
Roche/Hitachi 911	63	150.0	3.7	2.5	4.00	0.27	3.89
Roche/Hitachi 912	51	150.1	3.1	2.0	5.00	0.33	4.83
Roche/Hitachi 917	122	149.5	3.6	2.4	4.17	0.07	4.14
Average performance figures				2.2	4.70	1.58	3.96
WEIGHTED AVERAGE PERFORMANCE	4942			2.09	4.88	1.50	4.14

Datasheet 6. Glucose results from NY State Survey 9/20/2004

CLIA allowable Total Error, TEa Specimen C53	10	%					
Instrument w/B	Labs	Mean	SD	CV	Sig wo/B Bias	Sig	
All Methods	412	125	3.52	2.82	3.55	NA	NA
Abbott Aeroset	7	126.1	1.01	0.80	12.49	0.88	11.39
Beckman Coulter CX	60	123.9	2.98	2.41	4.16	0.88	3.79
Beckman Coulter LX-20	36	122.6	1.55	1.26	7.91	1.92	6.39
Bayer ADVIA 1650	15	127.6	3.54	2.77	3.60	2.08	2.85
Bayer ADVIA 2400	3	127.6	3.54	2.77	3.60	2.08	2.85
Bayer Express	4	123.1	3.52	2.86	3.50	1.52	2.97
Dade Behring Dimension	74	125.8	3.16	2.51	3.98	0.64	3.73
Hemocue	3	128.2	2.36	1.84	5.43	2.56	4.04
Hitachi 717	6	127	4.65	3.66	2.73	1.60	2.29
Hitachi 747	10	122.5	3.28	2.68	3.73	2.00	2.99
Hitachi 911	4	124.5	2.17	1.74	5.74	0.40	5.51
Hitachi 917	8	123.3	3.09	2.51	3.99	1.36	3.45
Hitachi MODULAR	24	123	2.86	2.33	4.30	1.60	3.61
I-Stat	6	123.5	0.57	0.46	21.67	1.20	19.07
Johnson & Johnson Vitros	70	127.3	2.35	1.85	5.42	1.84	4.42
Olympus AU400/600/640/2700/5400	30	125.3	3.49	2.79	3.59	0.24	3.50
Olympus AU5000/5200	5	129.4	4.12	3.18	3.14	3.52	2.04
Roche Cobas INTEGRA	11	122.4	3.15	2.57	3.89	2.08	3.08
Roche Cobas MIRA	13	123	6.72	5.46	1.83	1.60	1.54
Alfa Wasserman ACE	3	128.5	2.74	2.13	4.69	2.80	3.38
Average performance figures				2.43	5.47	1.64	4.64
WEIGHTED AVERAGE PERFORMANCE	392			2.34	4.94	1.33	4.26