CAP TODAY / 25 September 2007

Chemistry analyzers (for low-volume laboratories)

Part 1 of 10	Abaxis Inc.
	Ron Blasig ronblasig@abaxis.com
	3240 Whipple Rd. Union City, CA 94587
	800-822-2947 www.abaxis.com
Name of instrument/First year sold in U.S.	Piccolo Xpress/1995
List price/No. of analyzers sold in 2006	\$22,000 /—
No. units in clinical use in U.S./Outside U.S. Country where designed/Manufactured/Where reagents mftd.	1,500/1,500 U.S./U.S./U.S.
Operational type/Reagent type	self-contained disk with multi-test reagent panel
Sample handling system/Model type	disk loaded directly into instrument/benchtop
Dimensions in inches (H x W x D)/Instrument footprint	12.75 x 6 x 8/1 sq ft
Tests available on instrument in U.S.	ALP, ALT, AST, GGT, amylase, albumin, total protein, bilirubin total, BUN, creatinine, calcium, cholesterol, glucose, uric acid, sodium, creatine kinase, potassium, TCO ₂ ,
	chloride, cholesterol, HDL ratio, HDL, LDL, triglycerides-VLDL, phosphorus, direct
Tests cleared but not clinically released	bilirubin, magnesium, LD —
Tests not available in U.S. but submitted for 510(k) clearance Tests not available in U.S. but available in other countries	none
Research-use-only assays/Tests in development User-defined methods implemented for what analytes	—/— none
<u> </u>	
Methods supported/Immunoassay methods No. of direct ion selective electrode channels	enzymatic/na na
Must load separate reag. pack for each specimen/No. of diff. assays in pack	yes/4–14 analytes (chemistries) for 12 diff. chem./elec. profiles; reagent self-contained with each disk
Separate reag. pack for each test run	no
No. of different measured assays onboard simultaneously No. of different assays programmed, calibrated at once	26 14
No. of user-definable (open) channels/No. active simultaneously No. of different analytes for which system accommodates	0/na 4–14/self-contained disk with reagents 4–12
reag. containers onboard at once/Tests per container set	·
Shortest/Median onboard reag. stability/Refrigerated onboard Multiple reag. configurations supported	6 months/12 months/na yes
Reag. container placed directly on system for use Instrument has same capabilities when 3rd-party reag. used	yes na
Reag. only cost per reportable result for standard chemistries/ Therapeutic drugs/Special analytes	\$0.64/na/na
Walkaway capacity in minutes/No. of specimens/No. of tests-assays	approximately 12/1/14
System is liquid, dry, or reconstituted onboard Uses disposable cuvettes/Max. No. stored	reconstitutes onboard no/na
Uses washable cuvettes/Replacement frequency Minimum sample volume aspirated precisely at one time	no/na approximately 100 μL
Supplied with UPS (backup power)/Requires floor drain	no/no
Requires dedicated water system/Water consumption in L per hour Noise generated in decibels	no/na none
Dedicated pediatric sample cup/Dead volume Primary tube sampling/Pierces caps on primary tubes	no no/na
Sample bar-code reading capability/Autodiscrimination	yes/—
Reagent bar-code reading capability	yes
Bar-code placement per CLSI standard Auto2A Onboard test auto inventory (determines volume in container)	yes na
Measures No. of tests remaining/Short sample detection/Clot detection Automatic detection of adequate reag, for aspir. & analysis	na/yes/yes ves
Hemolysis/Turbidity detection-quantitation	yes/yes
Dilution of patient samples onboard/Automatic rerun capability Sample volume can be reduced to rerun out-of-linear-range high results/	yes/no na/na
Increased to rerun out-of-linear-range low results Autocalibration or autocalibration alert	yes
Calibrants stored onboard/Multipoint calibration supported	yes/yes
Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse Automatic shutdown/Startup programmable	self-calibrated onboard/disk/—/— yes/yes
Stat time to completion of all analytes, throughput per hr. for:	
 Sodium, potassium, chloride, TCO₂ Sodium, potassium, chloride, TCO₂, glucose, urea, creatinine 	12 min, 4 specimens 12 min, 4 specimens
Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample	12 min, 4 specimens
How often QC required/Onboard SW capability to review QC	na automatic QC onboard/yes
Onboard real-time QC/Support multiple QC lot Nos. per analyte	yes/yes
QC results transferred automatically to LIS	yes
Data mont canability/Instrument vendor cumplies LIC interfece	onhoard/no
Data mgmt. capability/Instrument vendor supplies LIS interface Interfaces up and running in active user sites with	onboard/no 20
Interfaces up and running in active user sites with	20
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete	20 no yes
Interfaces up and running in active user sites with Bidirectional interface capability	20 no
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays	no yes yes
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results	no yes yes
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/	20 no yes yes no —
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component	20 no yes yes no no no no no no no
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures	no yes yes no no no no a no/yes/yes 24-hr loaner/yes 3 years/—
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module	20 no yes yes yes no — no na no/yes/yes 24-hr loaner/yes 3 years/— daily: none; weekly: none; monthly: none na/yes
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel	20 no yes yes no no no na no/yes/yes 24-hr loaner/yes 3 years/— daily: none; weekly: none; monthly: none
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d)	20 no yes yes yes no no no na no/yes/yes 24-hr loaner/yes 3 years/— daily: none; weekly: none; monthly: none na/yes yes/yes 1-year warranty, extended warranty—\$1,200
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail.	no yes yes yes no no no na no/yes/yes 24-hr loaner/yes 3 years/— daily: none; weekly: none; monthly: none na/yes yes/yes 1-year warranty, extended warranty—\$1,200 compact chemistry system using a few drops of whole blood, serum, or plasma provides turnaround of results at point of care, including hands-on time in 15
Interfaces up and running in active user sites with Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d)	no yes yes yes no no no na no/yes/yes 24-hr loaner/yes 3 years/— daily: none; weekly: none; monthly: none na/yes yes/yes 1-year warranty, extended warranty—\$1,200 compact chemistry system using a few drops of whole blood, serum, or

An array of possibilities

CAP TODAY's lineup of chemistry analyzers for low-volume laboratories, which begins here, features 20 systems from 16 ven-

Joining the annual lineup are the following five analyzers:

- Hemagen Diagnostics' Analyst III, which uses only 90 µL of sample and requires less than 60 seconds of preparation work.
- Horiba ABX's ABX Pentra 400, which can run more than 53 assays, with room for 55 tests onboard at once. It boasts a throughput of 420 tests per hour.
- Medica's Easy RA, which is awaiting FDA 510(k) clearance. The analyzer offers radiofrequency identification-tagged reagents for reading and writing capability and features easy-to-replace components inside a slideout drawer.
- Response Biomedical's Ramp, which features two levels of control performed with every test.
- SDI Biomed's SDI CA480 clinical chemistry system, which has an onboard jet wash/dry system and a notebook-like operator interface.

Also profiled this year are instruments from Abaxis, Abbott Point of Care, Alfa Wassermann Diagnostic Technologies, Beckman Coulter, Dade Behring, Nova Biomedical, Ortho-Clinical Diagnostics, Randox Laboratories, Roche Diagnostics, Thermo Fisher Scientific, and Vital Diagnostics.

Readers interested in a particular analyzer should confirm that it has the stated features and capabilities.



Part 2 of 10	Abbott Point of Care Glen Tinevez glen.tinevez@abbott.com 104 Windsor Center Dr. East Windsor, NJ 08520 800-827-7828	Alfa Wassermann Diagnostic Technologies LLC info@alfawassermannus.com 4 Henderson Dr. West Caldwell, NJ 07006 800-220-4488
See accompanying article on page 25	www.abbottpointofcare.com	www.alfawassermannus.com
Name of instrument/First year sold in U.S. List price/No. of analyzers sold in 2006 No. units in clinical use in U.S./Outside U.S. Country where designed/Manufactured/Where reagents manufactured Operational type/Reagent type	i-Stat 1 analyzer/2000 \$8,761/— 30,000+ worldwide U.S./U.S./Canada —/self-contained single-use cartridges packages-slides	ACE/1993; ACE Alera Clinical Chemistry System/2004 \$69,995/— 1,100+/600+ U.S./U.S./U.S. batch, random access, discrete, cont. random access, stat/closed reag.
Sample handling system/Model type Dimensions in inches (H x W x D)/Instrument footprint	na/handheld 9.25 x 3.0 x 2.85/< 1 sq ft	system with open reag. system channel ring with up to 5 segments (15 samples/seg.)/benchtop ACE: 15.75 x 27.25 x 22.50; ACE Alera: 18 x 27.5 x 22.5/4.3 sq ft
Tests available on instrument in U.S.	tropinin I, CK-MB, lactate, BUN, creatinine, glucose, ionized calcium, sodium, potassium, chloride, hematocrit, pH, PCO2, PO2, TCO ₂ , ACTc, ACTk, PT/INR; calculated: hemoglobin, HCO3, BEecf, SO2, anion gap	albumin, gamma GT, bilirubin direct & total, calcium, creatinine, glucose, in. phosphorus, total iron, magnesium, total protein, BUN, uric acid, amylase, ASI (GOT), alkaline phosphatase, ALT (GPT), CK, LDH, cholesterol, HDL-C, LDL-C, triglycerides, sodium, potassium, chloride, CO ₂ , digoxin, T4, T-uptake, HbA1c, lipase, direct TIBC, ferritin
Tests cleared but not clinically released Tests not available in U.S. but submitted for FDA 510(k) clearance Tests not available in U.S. but available in other countries Research-use-only assays/Tests in development	na BNP na na/na	none none UIBC none/homocysteine, Lp(a), microalbumin, ApoAl, Apo B, transferrin
User-defined methods implemented for what analytes	na	open channel bottles are available for user-derived or third-party reagents
Methods supported/Immunoassay methods	potentiometry, amperometric, conductometric/—	photometry, potentiometry, turbidimetric/homogeneous EIA
No. of direct ion selective electrode channels • Must load separate reag. pack for each specimen/No. of diff. assays in pack	10 yes/up to 13	3 no/na
Separate reag. pack for each test run	yes	no 40
No. of different measured assays onboard simultaneously No. of different assays programmed, calibrated at once	na 18	40 200
No. of user-definable (open) channels/No. active simultaneously	na/na	15/15
No. of different analytes for which system accommodates reag. containers onboard at once/Tests per container set	na/unit use	40/30–250 tests per bottle
Shortest/Median onboard reag. stability/Refrigerated onboard	na/14 days/no	5 days/30 days/yes (10°C to 14°C)
Multiple reag. configurations supported Reag. container placed directly on system for use	no na	yes yes
Instrument has same capabilities when 3rd-party reag. used	na	yes
Reag. only cost per reportable result for standard chemistries/ Therapeutic drugs/Special analytes	based on volume/na/based on volume	\$0.16/\$3.50/\$3.50
Walkaway capacity in minutes/No. of specimens/No. of tests-assays	2 min/1/up to 18	75/75/248
System is liquid, dry, or reconstituted onboard		liquid
Uses disposable cuvettes/Max. No. stored Uses washable cuvettes/Replacement frequency	no/— no/—	yes/248 no/na
Minimum sample volume aspirated precisely at one time	16 μL	3 μL
Supplied with UPS (backup power)/Requires floor drain Requires dedicated water system/Water consumption in L per hour	no/no no/na	yes/no no/na
Noise generated in decibels	none	55
Dedicated pediatric sample cup/Dead volume Primary tube sampling/Pierces caps on primary tubes	no/na no/no	no/na yes/yes
Sample bar-code reading capability/Autodiscrimination	yes, shortly before sample is aspirated, by handheld scanner as tubes are	yes, as sample is being aspirated (2 of 5 interleaved, Codabar, code 39, code
Descent has eade reading conchility	loaded, at the bedside (2 of 5 interleaved, Codabar, codes 39 & 128)/yes	128 set B & C)/yes yes, proprietary dot coding
Reagent bar-code reading capability Bar-code placement per CLSI standard Auto2A	yes yes	yes, proprietary dol coding NO
Onboard test auto inventory (determines volume in container)	na na kusa kusa	yes
Measures No. of tests remaining/Short sample detection/Clot detection Automatic detection of adequate reag. for aspir. & analysis	na/yes/yes yes	yes/yes/no yes
Hemolysis/Turbidity detection-quantitation	no/no	bichromatic correction for both
Dilution of patient samples onboard/Automatic rerun capability Sample volume can be reduced to rerun out-of-linear-range high results/	no/no no/no	yes/yes yes/no
Increased to rerun out-of-linear-range low results		·
Autocalibration or autocalibration alert Calibrants stored onboard/Multipoint calibration supported Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse Automatic shutdown/Startup programmable	yes no/yes each test/each test/—/— yes/yes	yes no/yes 3 hr/30 days/45 days with 48 hr updates/na na/na
Stat time to completion of all analytes, throughput per hr. for:	Outle	Audio OF anatomic
 Sodium, potassium, chloride, TCO₂ Sodium, potassium, chloride, TCO₂, glucose, urea, creatinine 	2 min, na 2 min, na	4 min, 35 specimens 7 min, 20 specimens
Album., direct & total bili., AST, ALT, ALP	na, na	10 min, 12 specimens
Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC	none shortest interval: 24 hr; longest interval: each new lot or reagent/yes	immediate response, as soon as 10 sec daily/yes
Onboard real-time QC/Support multiple QC lot Nos. per analyte	yes/yes	yes/yes
QC results transferred automatically to LIS	yes	yes
Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites	optional add-on (<\$30,000, SW mftr: Abbott Point of Care)/yes (add'l cost) all systems	onboard/no Schuyler House, Antek, LabPak, others
Bidirectional interface capability	yes (broadcast download & host query)	yes (broadcast download)
Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays	yes yes	yes, when requisition is done
Uses LOINC to transmit orders & results	yes yes	yes no
How labs get LOINC codes for reagent kits	customized on site	na
Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system	yes na	no no
Modern servicing available/Can diagnose own malfunctions/	yes/yes	no/yes/yes
Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting	replacement within 24 hr/yes	24 hr/yes
Mean time between failures/To repair failures	not determined/replacement within 24 hr	2 per yr/1 hr
Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module	daily: none; weekly: none; monthly: none na/na	daily: 15 min; weekly: 30 min; monthly: 60 min yes/no
Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d)	—/yes \$750	4.5 days at manufacturer's facility/yes varies, several programs available
Distinguishing features (supplied by company)	handheld portable analyzer; unit use system can perform chemistry, blood gas, cardiac marker, and coagulation tests on two drops of whole blood or plasma	easy-to-use, multitasking software; closed-tube sampling; stat interrupt capability; extensive test menu; onboard sample and reagent refrigeration; onboard reagent inventory management; liquid, ready-to-use reagents; integrated ISE module; dedicated field service organization; self-contained analyzer; no external water source or waste drainage

Chemistry analyzers (for low-volume laboratories)

Part 3 of 10 Beckman Coulter Inc. Beckman Coulter Inc. 200 South Kraemer Blvd. 200 South Kraemer Blvd. P.O. Box 8000 P.O. Box 8000 Brea, CA 92822-8000 Brea, CA 92822-8000 See accompanying article on page 25 800-526-3821 www.beckmancoulter.com 800-526-3821 www.beckmancoulter.com Name of instrument/First year sold in U.S. Synchron CX4 Pro/2001 Synchron CX5 Pro/2001 \$162,400/-\$193,500/-List price/No. of analyzers sold in 2006 No. units in clinical use in U.S./Outside U.S. U.S./U.S./U.S. & Ireland U.S./U.S./U.S. & Ireland Country where designed/Manufactured/Where reagents manufactured Operational type/Reagent type continuous random access/open reagent system continuous random access/open reagent system Sample handling system/Model type sectors, centrifugable/floor-standing sectors, centrifugable/floor-standing Dimensions in inches (H x W x D)/Instrument footprint 69 x 47 x 30/9.8 sq ft 69 x 61 x 30/12.7 sq ft Tests available on instrument in U.S. alb, ALP, ALT, amylase, AST, BUN, calc., CO2, chloride, cholest., CK-MB, alb, ALP, ALT, amylase, AST, BUN, calc., CO2, chloride, cholest., CK-MB, creatinine, dir. bilirubin, GGT, glucose, HDLD, iron/TIBC, lipase, LD, LDLD, Mg, creatinine, dir. bilirubin, GGT, glucose, HDLD, iron/TIBC, lipase, LD, LDLD, Mg, phosphorus, potassium, sodium, total protein, total bilirubin, triglyceride, phosphorus, potassium, sodium, total protein, total bilirubin, triglyceride, triglyceride glycerol blanked, urea, uric acid; esoteric chemistries: ammonia, triglyceride glycerol blanked, urea, uric acid; esoteric chemistries: ammonia, cholinesterase, hemoglobin A1c, lactate, microalbumin, prealbumin, cholinesterase, hemoglobin A1c, lactate, microalbumin, prealbumin, salicylate; drugs of abuse testing; therapeutic drug monitoring; proteins: antisalicylate; drugs of abuse testing; therapeutic drug monitoring; proteins: anti-streptolysin O, IgA, IgM, IgG, rheumatoid factor, transferrin; streptolysin O, IgA, IgM, IgG, rheumatoid factor, transferrin; thyroids: thyroids: thyroxine, T-up, P-amylase, C-reactive protein, creatine kinase thyroxine, T-up, P-amylase, C-reactive protein, creatine kinase Tests cleared but not clinically released none none Tests not available in U.S. but submitted for FDA 510(k) clearance none none Tests not available in U.S. but available in other countries none none Research-use-only assays/Tests in development none/none none/none User-defined methods implemented for what analytes UIBC, cyclosporine, homocysteine, lithium, ecstacy UIBC, cyclosporine, homocysteine, lithium, ecstacy Methods supported/Immunoassay methods photometry, potentiometry, turbidimetric/bidentate turbidimetric, direct photometry, potentiometry, turbidimetric/bidentate turbidimetric, direct turbidimetric, particle enhanced turbidimetric, enzyme immunoassay turbidimetric, particle enhanced turbidimetric, enzyme immunoassay No. of direct ion selective electrode channels 5 (indirect) Must load separate reag. pack for each no/no/specimen/No. of diff. assays in pack Separate reag. pack for each test run no no No. of different measured assays onboard simultaneously 24 29 No. of different assays programmed, calibrated at once 50 50 No. of user-definable (open) channels/No. active simultaneously 96/24 100/29 24/2,400-9,600 (100-900 tests per container) No. of different analytes for which system accommodates 29/2,900-69,600 (100-2,400 tests per container) reag. containers onboard at once/Tests per container set Shortest/Median onboard reag. stability/Refrigerated onboard 168 hr/30 days/yes (2° to 8°C) 168 hr/30 days/yes (2° to 8°C) Multiple reag. configurations supported yes yes Reag. container placed directly on system for use yes yes Instrument has same capabilities when 3rd-party reag. used Reag. only cost per reportable result for standard chemistries/ assay dependent/--/-assay dependent/---/---Therapeutic drugs/Special analytes Walkaway capacity in minutes/No. of specimens/No. of tests-assays 400/63/1,512 400/63/1,827 System is liquid, dry, or reconstituted onboard liquid liquid Uses disposable cuvettes/Max. No. stored Uses washable cuvettes/Replacement frequency yes/permanent-2-yr warranty (80 stored on instrument) yes/permanent-2-yr warranty (80 stored on instrument) Minimum sample volume aspirated precisely at one time 3 µL Supplied with UPS (backup power)/Requires floor drain yes/no yes/no Requires dedicated water system/Water consumption in L per hour yes/7 L yes/7 L Noise generated in decibels 70 70 Dedicated pediatric sample cup/Dead volume yes/40 µL yes/40 µL Primary tube sampling/Pierces caps on primary tubes yes/no yes/no Sample bar-code reading capability/Autodiscrimination yes, on sample transport, shortly before sample is aspirated yes (2 of 5 interleaved, Codabar, codes 39 & 128)/yes (2 of 5 interleaved, Codabar, codes 39 & 128)/yes Reagent bar-code reading capability Bar-code placement per CLSI standard Auto2A yes yes Onboard test auto inventory (determines volume in container) yes Measures No. of tests remaining/Short sample detection/Clot detection yes/yes/yes yes/yes/yes Automatic detection of adequate reag. for aspir. & analysis Hemolysis/Turbidity detection-quantitation yes/yes yes/yes yes/no yes/no Dilution of patient samples onboard/Automatic rerun capability Sample volume can be reduced to rerun out-of-linear-range high results/ yes/no yes/no Increased to rerun out-of-linear-range low results Autocalibration or autocalibration alert Calibrants stored onboard/Multipoint calibration supported no/yes no/yes na/up to 90 days/60 days/14 days 24 hr/up to 90 days/60 days/14 days Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse Automatic shutdown/Startup programmable none required none required Stat time to completion of all analytes, throughput per hr. for: ullet Sodium, potassium, chloride, ${\sf TCO}_2$ 52 sec, 75 specimens na, na Sodium, potassium, chloride, TCO₂, glucose, urea, creatinine na, na 8 min, 75 specimens Album., direct & total bili., AST, ALT, ALP 10 min, 32 specimens 10 min, 32 specimens Typical time delay from ordering stat test to aspir. of sample 45 sec 45 sec How often QC required/Onboard SW capability to review QC 24 hr/yes 24 hr/yes Onboard real-time QC/Support multiple QC lot Nos. per analyte yes/yes yes/yes QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface onboard & optional add-on (SW mftr: Beckman Coulter DL2000)/yes onboard & optional add-on (SW mftr: Beckman Coulter DL2000)/yes (add'l cost) Lab information systems with which interfaces are currently up and Cerner, Misys, Meditech, Citation, MedLab, CHC, Siemens, McKesson, Cerner, Misys, Meditech, Citation, MedLab, CHC, Siemens, McKesson, others Labquest, CCA, VA-Mumps, others running in active user sites **Bidirectional interface capability** yes (broadcast download & host query) ves (broadcast download & host query) Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays ves Uses LOINC to transmit orders & results no no How labs get LOINC codes for reagent kits na Lab can control analyzer remotely no no yes Interface avail. (or will be) to automated specimen handling system yes Modem servicing available/Can diagnose own malfunctions/ yes/yes/no yes/yes/no **Determine malfunctioning component** On-site time of svc. engineer/Onboard error codes for troubleshooting metro: same day; rural: same or next day/yes metro: same day; rural: same or next day/yes Mean time between failures/To repair failures Average time to complete maintenance by lab personnel daily: 5 min; weekly: 15 min; monthly: 20 min daily: 5 min; weekly: 15 min; monthly: 20 min Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. 1 day on site, 5 days at vendor offices/no 1 day on site, 5 days at vendor offices/no Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) serum indices; centrifugable sectors; clot detection; bar-coded serum indices; centrifugable sectors; clot detection; bar-coded calibrators and calibrators and controls; host query; reagent load while running; controls; host query; reagent load while running; ready-to-use liquid reagents; ready-to-use liquid reagents; Peltier thermal ring; pulsed xenon light source; Peltier thermal ring; ISE system; pulsed xenon light source polychromatic correction; semipermanent glass cuvettes; available DL2000

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Part 4 of 10	Dade Behring Inc.	Hemagen Diagnostics Inc.
	1717 Deerfield Rd. Deerfield, IL 60015	Jim Miller jmiller@hemagen.com 9033 Red Branch Rd.
Con consumer with a second	800-242-3233	Columbia, MD 21045
See accompanying article on page 25	www.dadebehring.com	443-367-5500 www.hemagen.com
Name of instrument/First year sold in U.S.	Dimension Xpand Plus Integrated Chemistry System/2004	Analyst III/2007
List price/No. of analyzers sold in 2006 No. units in clinical use in U.S./Outside U.S.	—/— —/—	\$12,500/0 0/0
Country where designed/Manufactured/Where reagents manufactured	U.S./U.S./U.S.	France/France/U.S.
Operational type/Reagent type Sample handling system/Model type	continuous random access/self-contained single-use & multi-use cartridges racks/floor-standing	discrete/self-contained single-use cartridges-packages-slides built-in pipettor/benchtop
Dimensions in inches (H x W x D)/Instrument footprint	45 x 51 x 31 (without monitor)/10.6 sq ft	10 x 13 x 15/1 sq ft
Tests available on instrument in U.S.	ser. acetamino., acid phos., alb., alk. phos., ALT, ammonia, amylase, AST,	ALP, GGT, GPT, GOT, BUN, glucose, calcium, cholesterol, creatinine,
	automated HDL & LDL, , C3 compl., C4, calc., carbemaz., CO ₂ , chlor., cholesterol,	triglycerides, amylase, uric acid, total bilirubin, total protein,
	CRP, creat. kin., creatinine, CK-MB isoenzyme, digitoxin, digoxin, ethyl alcohol, gentamicin, GGT, glucose, HbA1c, IgA/G/M, iron, lactic acid, LDH, lidoc., lipase,	HDL cholesterol
	lith., magnes., microalb., n-acetylprocain., NT-pro BNP, phenobart., pheny.,	
	phosphorus, potas., prealbum., procainam., pseudocholinest., ser. salicyl., sod., ser. TCA, theophyl., thyronine uptake, TIBC, tobramycin, tot. protein, tPSA, tot.	
	T4/thyroxine, transferrin, triglycerides, urea nitrog., uric acid, urine amphet.	
	Screen, urine barbitura. screen, benzodiazep., cannabinoids, cocaine metabolite, methadone, opiates, phencyclidine, TBIL, DBIL, cyclosporine,	
	ferritin, fPSA, free T4/thyroxine, hCG, myglobin, TSH, triiodothyronine, trop. I,	
	urine/CSF protein, valporic acid, vancomycin, tacrolimus, serum barb., serum benzodiazep., serum TCA, urine ecstacy, urine propoxy, cyclosporine ext. range	
Tests cleared but not clinically released	— proposty, obtain ross, anno occacy, anno proposty, cyclooperine osa range	ALB, CO ₂ , Phos, CK
Tests not available in U.S. but submitted for FDA 510(k) clearance Tests not available in U.S. but available in other countries	_	na - na
Research-use-only assays/Tests in development	—/sirolimus, myeloperox., mycophenolic acid	na/sodium, potassium, chloride, T4, lipase
User-defined methods implemented for what analyte	-	na
Methods supported/Immunoassay methods	photometry, potentiometry, turbidimetric assays/Integrated Multisensor	photometry/—
No. of direct ion selective electrode channels	Technology, heterogenous EIA using HM, Emit, latex turbidimetric 3	0
Must load separate reag. pack for each	no/—	yes/14
specimen/No. of diff. assays in pack • Separate reag. pack for each test run	no	no
No. of different measured assays onboard simultaneously	47	14
No. of different assays programmed, calibrated at once No. of user-definable (open) channels/No. active simultaneously	190 10/10	14 0/0
No. of different analytes for which system accommodates	47/15–360	—/1 4
reag. containers onboard at once/Tests per container set Shortest/Median onboard reag. stability/Refrigerated onboard	72 hr/30 days/yes (2° to 8°C)	8 hours/1 day/yes
Multiple reag. configurations supported	yes	no
Reag. container placed directly on system for use Instrument has same capabilities when 3rd-party reag. used	yes yes	yes no
Reag. only cost per reportable result for standard chemistries/	<u></u> -	\$0.66/na/na
Therapeutic drugs/Special analytes Walkaway capacity in minutes/No. of specimens/No. of tests-assays	can be hrs/60/>1,000	10/1/14
System is liquid, dry, or reconstituted onboard	liquid, no reagent prep required by operator	reconstituted
Uses disposable cuvettes/Max. No. stored Uses washable cuvettes/Replacement frequency	yes/12,000 no/—	yes/na no/—
Minimum sample volume aspirated precisely at one time Supplied with UPS (backup power)/Requires floor drain	2 μL	10 µL no/no
Requires dedicated water system/Water consumption in L per hour	yes/no yes/up to 4 to 4.5 μL	no/—
Noise generated in decibels Dedicated pediatric sample cup/Dead volume	<70 no/20 μL	unknown, very low no/—
Primary tube sampling/Pierces caps on primary tubes	yes/no	no/no
Sample bar-code reading capability/Autodiscrimination Reagent bar-code reading capability	yes (2 of 5 interleaved, Codabar, codes 39 & 128)/yes ves	no/— no
Bar-code placement per CLSI standard Auto2A	yes	no
Onboard test auto inventory (determines volume in container) Measures No. of tests remaining/Short sample detection/Clot detection	yes yes/yes/no	no —/—/—
Automatic detection of adequate reag. for aspir. & analysis	yes	_
Hemolysis/Turbidity detection-quantitation Dilution of patient samples onboard/Automatic rerun capability	yes/yes yes/yes	—/— yes/no
Sample volume can be reduced to rerun out-of-linear-range high results/	yes/yes	—/—
Increased to rerun out-of-linear-range low results Autocalibration or autocalibration alert	yes	yes
Calibrants stored onboard/Multipoint calibration supported	yes(Na, K, CI)/yes	_/_
Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse Automatic shutdown/Startup programmable	every 2 hrs, autocalibrate/—/60–90 days/30 days not required/—	—/monthly/—/— no/no
Stat time to completion of all analytes, throughput per hr. for:		
Sodium, potassium, chloride, TCO ₂	2 min, 62 specimens	-,-
Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP	4 min, 62 specimens 8 min, 62 specimens	11 min, 4 specimens 11 min, 4 specimens
Typical time delay from ordering stat test to aspir. of sample	60 sec steady state, 2 min from standby	
How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte	daily/yes yes/yes	—/— no/no
QC results transferred automatically to LIS	yes yes	yes
Data mgmt. capability/Instrument vendor supplies LIS interface	optional add-on/yes (additional cost)	_/ <u>_</u>
Lab information systems with which interfaces are currently up and	interfaces available for all major LIS vendors	_
running in active user sites Bidirectional interface capability	yes (broadcast download & host query)	no
Test results transmitted to LIS as soon as chem. time complete	yes	yes
LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results	yes no	yes no
How labs get LOINC codes for reagent kits	<u> </u>	<u> </u>
Lab can control analyzer remotely	no	no
Interface avail. (or will be) to automated specimen handling system	no	10
Modem servicing available/Can diagnose own malfunctions/	yes/yes/yes	no/—/—
Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting	2–8 hr/yes	na/—
Mean time between failures/To repair failures	_/_ `	ma na
Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module	daily: 5 min; weekly: 10 min; monthly: 15 min no/no	na —/—
Training provided with purchase/Advanced oper. training avail.	5 days on site, 4 days at vendor offices/no	1 day on site/— \$1 250
Annual service contract cost (24 h/7 d)	multiple types	\$1,250
Distinguishing features (supplied by company)	consolidated low-volume workstation integrates immunoassays onboard with other chemistries; allows single platform to meet more than 95 percent of	uses only 90 µL of sample & requires less than 60 seconds of prep work; minimal maintenance required; offered with sodium, potassium, and chloride
	testing needs; eliminates sample splitting, aliquotting	ISE units
Tabulation does not represent an endersement by the College of American		

Part 5 of 10	Horiba ABX Donna Merithew dmerithew@us.abx.fr 34 Bunsen Dr.	Medica Corporation Charlene Soley csoley@medicacorp.com 5 Oak Park Drive Redford MA 01720
See accompanying article on page 25	Irvine, CA 92618 888-903-5001 www.horiba-abx.com	Bedford, MA 01730 781-275-7425 www.medicacorp.com
Name of instrument/First year sold in U.S. List price/No. of analyzers sold in 2006 No. units in clinical use in U.S./Outside U.S. Country where designed/Manufactured/Where reagents manufactured Operational type/Reagent type Sample handling system/Model type Dimensions in inches (H x W x D)/Instrument footprint	ABX Pentra 400/2006 \$89,000/21 60/500 France/France batch, random access, discrete, continuous random access/self-contained single-use cartridges-packages-slides, open reagent system rack/benchtop 25 x 40 x 28 in/7.7 sq ft	Easy RA/— -/- U.S./U.S./U.S. batch, random access, discrete, continuous random access self-contained multi-use cartridge/packages/slides -/benchtop 15 x 40 x 26/—
, , , , , , , , , , , , , , , , , , , ,	·	
Tests available on instrument in U.S. Tests cleared but not clinically released Tests not available in U.S. but submitted for FDA 510(k) clearance Tests not available in U.S. but available in other countries Research-use-only assays/Tests in development	albumin, calcium, sodium, alk phos, ALT, carbon dioxide, glucose (PAP), lipase, total protein, chloride, glucose (hexokinase), magnesium, triglycerides, amylase, cholesterol, nitrogen, iron, myoglobin, uric acid, total bilirubin, creatinine, lactic acid, phosphorus, direct dilirubin, potassium, HDL, CK, CRP, GGT, LDH, LDL, micro, urea, nitrogen na na Alpha 1 antitypsin, C3, C4, ceruloplamin, orosomucoid, heparin, kappa chains, lambda chains —/TDMs, DAUs	none glucose-trinder, sodium, potassium, chloride, lithium, calcium, cholesterol none none —/albumin, alkaline phosphatase, alanine aminotransferase, aspartate aminotransferase, blood urea nitrogen, creatinine, GLU-H, direct bilirubin, total bilirubin, GGT, HDL cholesterol, LDH, total protein, triglycerides, uric
User-defined methods implemented for what analytes	alcohol, apolipoprotein A1, apolipoprotien B, beta 2, microglobulin, ferritin, fructosamine, glyco mark, haptoglobin, Hgb A1c, homocysteine, HS CRP, IgA, IgG, IgM, pre albumin, rheumatoid factor, TIBC, transferrin, UIBC	acid, phosphorus, magnesium, CO ₂ , CK, amylase, iron, creatinine (urine) —
Methods supported/Immunoassay methods No. of direct ion selective electrode channels • Must load separate reag. pack for each specimen/No. of diff. assays in pack • Separate reag. pack for each test run	photometry, potentiometry (ion selective electrode), turbidimetric/— 3 no/— no	photometry, potentiometry 4 no/— no
No. of different measured assays onboard simultaneously No. of different assays programmed, calibrated at once No. of user-definable (open) channels/No. active simultaneously No. of different analytes for which system accommodates reag. containers onboard at once/Tests per container set	55 55 15/15 55/100 to 400	28 28 0/na 28/80 to 250
Shortest/Median onboard reag. stability/Refrigerated onboard Multiple reag. configurations supported Reag. container placed directly on system for use Instrument has same capabilities when 3rd-party reag. used Reag. only cost per reportable result for standard chemistries/ Therapeutic drugs/Special analytes	8 hours/30 days/yes (15° to 32°C) yes yes yes//	168 hrs/30 days/yes yes yes na \$0.16/—/—
Walkaway capacity in minutes/No. of specimens/No. of tests-assays System is liquid, dry, or reconstituted onboard Uses disposable cuvettes/Max. No. stored Uses washable cuvettes/Replacement frequency Minimum sample volume aspirated precisely at one time	2 hrs/60/— liquid yes/432 no/— 2 μL	36/24/28 liquid yes/72 no/na 2 μL
Supplied with UPS (backup power)/Requires floor drain Requires dedicated water system/Water consumption in L per hour Noise generated in decibels Dedicated pediatric sample cup/Dead volume Primary tube sampling/Pierces caps on primary tubes	no/no no/avg. 0.5 L <66 no/— yes/no	no/no no/— minimal no/— yes/no
Sample bar-code reading capability/Autodiscrimination Reagent bar-code reading capability Bar-code placement per CLSI standard Auto2A Onboard test auto inventory (determines volume in container) Measures No. of tests remaining/Short sample detection/Clot detection Automatic detection of adequate reag. for aspir. & analysis Hemolysis/Turbidity detection-quantitation Dilution of patient samples onboard/Automatic rerun capability Sample volume can be reduced to rerun out-of-linear-range high results/	yes/no yes yes yes yes yes/yes yes/yes yes yes/yes yes/yes yes/yes yes/yes	yes na; RFID — yes yes/yes/no yes no/no yes/yes yes/yos
Increased to rerun out-of-linear-range low results Autocalibration or autocalibration alert Calibrants stored onboard/Multipoint calibration supported Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse Automatic shutdown/Startup programmable	yes yes/yes 2 hrs/14 days/—/— no/yes	yes no/yes 8 hrs/30 days/—/— no/no
Stat time to completion of all analytes, throughput per hr. for: • Sodium, potassium, chloride, TCO ₂ • Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine • Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS	<5 min, — 7.5 min, 35 specimens <11 min, 23 specimens 1–2 min 8 hr/yes yes/yes yes	3 min, 200 specimens 8 min, 100 specimens 9 min, — — CLIA minimum/yes no/yes yes
Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete	onboard/no Antek, Fletcher Flora, Orchard, Schuyler House yes yes	onboard/yes — yes yes
LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits	yes no —	yes no —
Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system	no no	no no
Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d)	no/no/no <24 hrs/yes —/<24 hrs daily: 5 min; weekly: 5 min; monthly: 15 min yes/no 5 days at vendor office/yes —	no/yes/yes —/yes 1 year/— daily: 20 min; weekly: —; monthly: 30 min no/no —/— —
Distinguishing features (supplied by company)	flexibility to run more than 53 assays with room for 55 tests onboard at once; high throughput of up to 420 tests per hour; clot level and crash protection on a benchtop analyzer; auto rerun, autocalibration, and autodilution; user-friendly, color-coded touchscreen for easy operation; ability to run up to three reagents on a single assay; most reagents in plug-and-play cassettes	pending 510(k) clearance; simplified user interface accessed through a touchscreen display; RFID-tagged reagents allow for reading and writing capability; all reagent parameters programmed on the wedge, no data entry; easy-to-replace components all located in a slide-out drawer; comprehensive inventories of all system components

Part 6 of 10	Nova Biomedical Corp. info@novabiomedical.com	Nova Biomedical Corp. info@novabiomedical.com
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	800-458-5813	800-458-5813
See accompanying article on page 25	www.novabiomedical.com	www.novabiomedical.com
Name of instrument/Eiret year cold in U.C.	Stat Drafila Critical Cara Varcas/2002	Stat Profile nUOv covice/1000
Name of instrument/First year sold in U.S.	Stat Profile Critical Care Xpress/2002	Stat Profile pHOx series/1998
List price/No. of analyzers sold in 2006 No. units in clinical use in U.S./Outside U.S.	\$25,000-\$59,000/na /	\$12,000–\$32,000/na —/—
Country where designed/Manufactured/Where reagents manufactured	U.S./U.S./U.S.	U.S./U.S./U.S.
Operational type/Reagent type	discrete/self-contained multi-use cartridges	discrete/self-contained multi-use cartridges-packages-slides
Sample handling system/Model type	sample automatically drawn from syringe, capillary, or open tube/benchtop	sample automatically drawn from syringe, capillary, or open tube/benchto
Dimensions in inches (H x W x D)/Instrument footprint	17.2 x 17.3 x 22.3/2.7 sq ft	15 x 15 x 18/1.9 sq ft
Tests available on instrument in U.S.	pH, PCO ₂ , PO ₂ , SO ₂ %, hematocrit, hemoglobin, sodium, potassium, chloride,	pH, PCO ₂ , PO ₂ , SO ₂ %, hematocrit, hemoglobin, sodium, potassium, chloride
	ionized calcium, ionized Mg, glucose, BUN, creatinine, lactate, bilirubin, deoxyhemoglobin, oxyhemoglobin, methemoglobin, carboxyhemoglobin	ionized calcium, glucose, lactate
Tests cleared but not clinically released	none	none
Tests not available in U.S. but submitted for FDA 510(k) clearance	none	none
Tests not available in U.S. but available in other countries	none	none
Research-use-only assays/Tests in development	none	none
User-defined methods implemented for what analytes	none	none
Mathodo ourrouted //mmunococcu methodo	notantiametry (ICE) anticel reflectance/no	natartiamatus (ICE) antical reflectance (no
Methods supported/Immunoassay methods No. of direct ion selective electrode channels	potentiometry (ISE), optical, reflectance/na 12	potentiometry (ISE), optical, reflectance/na
Must load separate reag, pack for each	no/na	no/na
specimen/No. of diff. assays in pack		
Separate reag. pack for each test run	no	no
No. of different measured assays onboard simultaneously	20	11
No. of different assays programmed, calibrated at once	20	11
No. of user-definable (open) channels/No. active simultaneously	0/na	0/na
No. of different analytes for which system accommodates	20/200–500 samples (2,600–6,500 tests), depending on lab	11/varies by analyzer and laboratory use pattern
reag. containers onboard at once/Tests per container set	45 days/45 days/no	45 days/45 days/no
Shortest/Median onboard reag. stability/Refrigerated onboard Multiple reag. configurations supported	45 days/45 days/no na	45 days/45 days/no na
Multiple reag. configurations supported Reag. container placed directly on system for use	requires operator prehandling, preparation	na requires operator prehandling, preparation
Instrument has same capabilities when 3rd-party reag. used	na	na
Reag. only cost per reportable result for standard chemistries/	\$.06-\$.28 per test (cost varies with volume); bundled instr. reag. maint. cost	varies by model/na/na
Therapeutic drugs/Special analytes	per result \$.07-\$.31 per test (5-yr reagent rental)/na/na	
Walkaway capacity in minutes/No. of specimens/No. of tests-assays	na/na/na	na/na/na
System is liquid, dry, or reconstituted onboard	ISE	ISE
Uses disposable cuvettes/Max. No. stored	no/na	no/na
Uses washable cuvettes/Replacement frequency	no/na	no/na
Minimum sample volume aspirated precisely at one time Supplied with UPS (backup power)/Requires floor drain	60 μL no (optional)/no	45 µL
Requires dedicated water system/Water consumption in L per hour	no/na	no (optional)/no no/na
Noise generated in decibels	minimal	minimal
Dedicated pediatric sample cup/Dead volume	no/na	no/na
Primary tube sampling/Pierces caps on primary tubes	yes/no	yes/no
Sample bar-code reading capability/Autodiscrimination	yes (optional), by handheld scanner as tubes are loaded onto instrument	yes, by handheld scanner as tubes are loaded onto instrument
B	(2 of 5 interleaved, UPC, Codabar, codes 39 &128)/yes	(2 of 5 interleaved, UPC, Codabar, codes 39 &128)/yes
Reagent bar-code reading capability	yes	yes
Bar-code placement per CLSI standard Auto2A Onboard test auto inventory (determines volume in container)	NO NOS	no vos
Measures No. of tests remaining/Short sample detection/Clot detection	yes yes/yes	yes yes/yes
Automatic detection of adequate reag. for aspir. & analysis	Ves	yes
Hemolysis/Turbidity detection-quantitation	yes (on co-oximeter module)/yes (on co-oximeter module)	yes*/yes*
Dilution of patient samples onboard/Automatic rerun capability	yes (on co-oximeter module)/no	yes*/no
Sample volume can be reduced to rerun out-of-linear-range high results/	no/no	no/no
Increased to rerun out-of-linear-range low results		
Autocalibration or autocalibration alert Calibrants stored onboard/Multipoint calibration supported	yes ves/ves	yes yes/yes
Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse	30–120 min/30–120 min/na/na	30–120 min/30–120 min/na/na
Automatic shutdown/Startup programmable	yes/yes	yes/yes
	· ·	· ·
Stat time to completion of all analytes, throughput per hr. for:	E0 and 26 26 depending on the mode	E0 ago 44
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ chucoso, uroz, creatinino	50 sec, 26-36, depending on use mode	50 sec, 44
 Sodium, potassium, chloride, TCO₂, glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP 	123 sec, 21-24, depending on use mode	na, na
• Album., direct & total bill., AS1, AL1, ALP Typical time delay from ordering stat test to aspir. of sample	na, na <2 sec	na, na <2 sec
How often QC required/Onboard SW capability to review QC	8 hr/yes	8 hr (CLIA)/yes
Onboard real-time QC/Support multiple QC lot Nos. per analyte	yes/yes	yes/yes
QC results transferred automatically to LIS	yes	yes
Date manut conchility/landsmanut variable and the Life is a	anhaged/no	nalna
Data mgmt. capability/Instrument vendor supplies LIS interface	onboard/no	no/no
Lab information systems with which interfaces are currently up and running in active user sites	na	virtually all
Bidirectional interface capability	yes	yes (broadcast download & host query)
Test results transmitted to LIS as soon as chem. time complete	yes	yes
LIS interface operates simultaneously with running assays	yes	yes
Uses LOINC to transmit orders & results	no	no
How labs get LOINC codes for reagent kits	na	na
Lab can control analyzer remotely	yes	yes
Interface avail. (or will be) to automated specimen handling system	no	no
Modem servicing available/Can diagnose own malfunctions/	yes/yes/yes	yes/yes/yes
Determine malfunctioning component	Observation and hardware	Observed by force
On-site time of svc. engineer/Onboard error codes for troubleshooting	<8 business hr/yes	<8 business hr/yes
Mean time between failures/To repair failures Average time to complete maintenance by lab personnel	na/na daily: none; weekly: <5 min; monthly: <15 min	na/na daily: none; weekly: <5 min; monthly: <15 min
Onboard maintenance records/Maint. training demo module	ves (includes audit trail of who replaced parts)/ves	yes/yes
Training provided with purchase/Advanced oper. training avail.	1 day on site/yes	1 day on site/yes
Annual service contract cost (24 h/7 d)	\$3,750-\$7,685	varies by analyzer configuration & geographic location; discounts for
, ,		multiple-year contract or 5-year reagent rental or lease
Distinguishing features (supplied by company)	comprehensive 19-test critical care profile, including ionized Mg, BUN, and	onboard quality control; liquid calibration eliminates gas tanks; remote
	creatinine; color touchscreen; integrated co-oximeter; open software	control; remote review; space-saving design
	architecture; onboard data management; automated onboard quality	
	control; sealed waste system; auto-monitoring of QC and reagent packs;	
	control; sealed waste system; auto-monitoring of QC and reagent packs;	
	control; sealed waste system; auto-monitoring of QC and reagent packs;	
	control; sealed waste system; auto-monitoring of QC and reagent packs;	

Part 7 of 10		
	Nova Piamedical Corn	Ortho Clinical Diagnostics
rait r or to	Nova Biomedical Corp.	Ortho-Clinical Diagnostics
	info@novabiomedical.com	Sales Support
	200 Prospect St.	1001 U.S. Highway 202
Con annual manufacture of the same of the	Waltham, MA 02454-9141	Raritan, NJ 08869
See accompanying article on page 25	800-458-5813 www.novabiomedical.com	800-828-6316 www.orthoclinical.com
Name of instrument/First year sold in U.S.	Nova 16/1995	Vitros DT 60 II Chemistry System (DT 60 II, DTE, DTSC)/1993
List price/No. of analyzers sold in 2006	\$22,500-\$25,500/na	—/—
No. units in clinical use in U.S./Outside U.S.	_/ _	15,000 units worldwide
Country where designed/Manufactured/Where reagents manufactured	U.S./U.S./U.S.	U.S./U.S./U.S.
Operational type/Reagent type	batch, random access/self-contained multiuse cartridges	batch, random access, discrete/self-contained single-use cartridges-
operational type/ficagent type	40-position tray, stat sampling directly from sample	packages-slides
Comple handling auston (Madel true		
Sample handling system/Model type	container/benchtop	—/benchtop
Dimensions in inches (H x W x D)/Instrument footprint	20.5 x 19.2 x 20.7/2.75 sq ft	6.75 x 18.75 x 13.75/1.8 sq ft (DT 60 II)
Tests available on instrument in U.S.	sodium, potassium, chloride, total CO ₂ , glucose, BUN, creatinine, Hct	ammonia, cholesterol, HDL chol., neonatal bilirubin, total protein,
		amylase, creatinine, lactate, phosphorus, triglycerides, BUN-urea,
		glucose, Mg, total bilirubin, uric acid, albumin, AST, CK, GGT, lipase, ALP,
		calcium, iron, lithium, ALT, cholinesterase, LDH, theophylline, CO ₂ ,
		sodium, potassium, chloride, urine creatinine, CK-MB
Tests cleared but not clinically released	none	none
Tests not available in U.S. but submitted for FDA 510(k) clearance		
	none	none
Tests not available in U.S. but available in other countries	none	none
Research-use-only assays/Tests in development	none/none	none/none
User-defined methods implemented for what analytes	none	none
Methods supported/Immunoassay methods	potentiometry/na	potentiometry, colorimetric, enzymatic/na
No. of direct ion selective electrode channels	8	4
Must load separate reag, pack for each	no/na	yes/1
specimen/No. of diff. assays in pack	TIV, TU) ooi 1
		100
Separate reag. pack for each test run	no	yes
No. of different measured assays onboard simultaneously	8	one per module (DT 60 II, DTE II, DTSC II)
No. of different assays programmed, calibrated at once	8	1
No. of user-definable (open) channels/No. active simultaneously	0/na	none
No. of different analytes for which system accommodates	8/(@ 8,000 tests/mo): 2,700 tests	na/na
reag. containers onboard at once/Tests per container set		
	O4 days /O4 days /ne	na la a la a
Shortest/Median onboard reag. stability/Refrigerated onboard	21 days/21 days/no	na/na/no
Multiple reag. configurations supported	na	no
Reag. container placed directly on system for use	no, requires prehandling (remove clip from sealed bag & mix)	no
Instrument has same capabilities when 3rd-party reag. used	na	na
Reag. only cost per reportable result for standard chemistries/	standard chemistries: @25 sam/d: \$0.40 (8-test panel); bundled instr.,	na/na/na
Therapeutic drugs/Special analytes	reag., maint. cost per result: \$0.92 (8-test panel)/—/—	
Walkaway capacity in minutes/No. of specimens/No. of tests-assays	60 per tray/40 per tray/280 per tray	na/na/na
System is liquid, dry, or reconstituted onboard	na	dry
Uses disposable cuvettes/Max. No. stored	no/na	no/na
Uses washable cuvettes/Replacement frequency	na/na	no/na
Minimum sample volume aspirated precisely at one time	50 μL	10 μL
	•	· · · · ·
Supplied with UPS (backup power)/Requires floor drain	no/no	no/no
Requires dedicated water system/Water consumption in L per hour	no/na	no/none
Noise generated in decibels	minimal	_
Dedicated pediatric sample cup/Dead volume	na	na
Primary tube sampling/Pierces caps on primary tubes	ves/no	no/no
Sample bar-code reading capability/Autodiscrimination	yes, by handheld scanner as tubes are loaded onto instrument	no/—
Campio sai code rodanig capasinty//tatedicommittation	(2 of 5 interleaved, UPC, Codabar, codes 39 & 128)/yes	110/
Degrant has ead a reading conchility		1100
Reagent bar-code reading capability	alternate method	yes
Bar-code placement per CLSI standard Auto2A	na	-
Onboard test auto inventory (determines volume in container)	yes	na
Measures No. of tests remaining/Short sample detection/Clot detection	no/yes/yes	na/na/na
Automatic detection of adequate reag. for aspir. & analysis	yes	na
Hemolysis/Turbidity detection-quantitation	no/no	no/no
Dilution of patient samples onboard/Automatic rerun capability	yes/yes	no/no
Sample volume can be reduced to rerun out-of-linear-range high results/	no/no	no/no
Increased to rerun out-of-linear-range low results		
Autocalibration or autocalibration alert	yes	no no
Calibrants stored onboard/Multipoint calibration supported	yes/na	no/yes
Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse	2 hr/2 hr/na/na	reagent lot changes
Automatic shutdown/Startup programmable	na/na	no/no
Automatic shutucwii/ startup programmabic	nu/nd	HO/ HU
A		
Stat time to completion of all analytes, throughput per hr. for:		
Stat time to completion of all analytes, throughput per hr. for: • Sodium, potassium, chloride, TCO ₂	52 sec, 69 specimens	15 tests
Sodium, potassium, chloride, TCO ₂	52 sec, 69 specimens 85 sec, 45 specimens	15 tests 75 tests
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine	85 sec, 45 specimens	75 tests
 Sodium, potassium, chloride, TCO₂ Sodium, potassium, chloride, TCO₂, glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP 	85 sec, 45 specimens na, na	75 tests 20 tests
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample	85 sec, 45 specimens na, na 9 sec	75 tests 20 tests none
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes	75 tests 20 tests none every 24 hr/no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte	85 sec, 45 specimens na, na 9 sec	75 tests 20 tests none
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes	75 tests 20 tests none every 24 hr/no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes	75 tests 20 tests none every 24 hr/no no/no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes	75 tests 20 tests none every 24 hr/no no/no yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no	75 tests 20 tests none every 24 hr/no no/no yes —/no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes	75 tests 20 tests none every 24 hr/no no/no yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others	75 tests 20 tests none every 24 hr/no no/no yes —/no —
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no	75 tests 20 tests none every 24 hr/no no/no yes /no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others	75 tests 20 tests none every 24 hr/no no/no yes —/no —
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes	75 tests 20 tests none every 24 hr/no no/no yes /no no yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no	75 tests 20 tests none every 24 hr/no no/no yes /no no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album, direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album, direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no — yes	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no — yes no	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no — yes	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no — yes no no/yes/yes	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no/yes/yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no — yes no no/yes/yes <8 business hr/yes	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no/yes/yes/yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album, direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no no no no/yes/yes <8 business hr/yes na/na	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no/yes/yes/yes/
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no — yes no no/yes/yes <8 business hr/yes	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no/yes/yes/yes
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album, direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no no no no/yes/yes <8 business hr/yes na/na	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no/yes/yes/yes/
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no no/yes/yes <8 business hr/yes na/na daily: <2 min; weekly: <5 min; monthly: <5 min no/no	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no no no no solves/yes/yes/- daily: 5 min; weekly: 5 min; monthly: none no/no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album, direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail.	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no — yes no no/yes/yes <8 business hr/yes na/na daily: <2 min; weekly: <5 min; monthly: <5 min no/no 2 days on site/yes	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no/yes/yes/yes/- daily: 5 min; weekly: 5 min; monthly: none
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album, direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no no/yes/yes <8 business hr/yes na/na daily: <2 min; weekly: <5 min; monthly: <5 min no/no	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no no no no solves/yes/yes/- daily: 5 min; weekly: 5 min; monthly: none no/no
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album, direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d)	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no no no/yes/yes <8 business hr/yes na/na daily: <2 min; weekly: <5 min; monthly: <5 min no/no 2 days on site/yes call for pricing	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no no/yes/yes/- daily: 5 min; weekly: 5 min; monthly: none no/no yes/
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail.	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no no no/yes/yes <8 business hr/yes na/na daily: <2 min; weekly: <5 min; monthly: <5 min no/no 2 days on site/yes call for pricing whole blood analyzer for creatinine & TCO2; can analyze whole blood,	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no/yes/yes/- daily: 5 min; weekly: 5 min; monthly: none no/no yes/ disposable tips eliminate sample carryover; random access testing so
Sodium, potassium, chloride, TCO ₂ Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine Album., direct & total bili., AST, ALT, ALP Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC Onboard real-time QC/Support multiple QC lot Nos. per analyte QC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d)	85 sec, 45 specimens na, na 9 sec CLIA minimum/yes no/yes yes onboard & optional add-on (\$9,225, SW mftr: Nova)/no most LIS vendors including Cerner, Misys, McKesson, Soft, others yes yes no no no no no/yes/yes <8 business hr/yes na/na daily: <2 min; weekly: <5 min; monthly: <5 min no/no 2 days on site/yes call for pricing	75 tests 20 tests none every 24 hr/no no/no yes /no no yes yes no no no no/yes/yes/- daily: 5 min; weekly: 5 min; monthly: none no/no yes/
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Part 8 of 10	Randox Laboratories	Response Biomedical Corporation
	marketing@randox.com 4065 Oceanside Blvd., Ste. Q	Marcia Zucker mzucker@responsebio.com 100-8900 Blenlyon Parkway
	Oceanside, CA 92056	Brnaby, BC, V5J 5J8 Canada
See accompanying article on page 25	760-639-1500 www.randox.com	732-603-1194 www.responsebio.com
Name of instrument/Eirst year cold in U.C.	Dv Doutono/2005	Pomn/200E
Name of instrument/First year sold in U.S. List price/No. of analyzers sold in 2006	Rx Daytona/2005 —/—	Ramp/2005 available upon request/—
No. units in clinical use in U.S./Outside U.S.	>800 units worldwide	25/700+
Country where designed/Manufactured/Where reagents manufactured	Japan/Japan/U.K.	Canada/Canada
Operational type/Reagent type	random access, discrete/self-contained multi-use cartridges-packages-	discrete/self-contained single-use cartridges-packages-slides
Sample handling system/Model type	slides removable ring/benchtop	—/handheld
Dimensions in inches (H x W x D)/Instrument footprint	30.2 x 24.8 x 20.2 sq ft/—	6 x 10.5 x 10/—
Total control on instrument in HO	totidales alle aldeles ALT annualis alle ales ACT (OCT) annuales	Annual Landon OV ND Landings and this side and
Tests available on instrument in U.S.	*acid phos., alb., aldolase, ALT, ammonia, alk. phos., AST (GOT), amylase, panc. amylase, bilirubin (direct/total), calcium, total CO ₂ , cholesterol,	troponin I, anthrax, CK-MB, botulinum, myoglobin, ricin, pox
	HDL-C, LDL-C, CK-NAC, CK-MB, complement C3/C4, copper, CRP, HS CRP,	
	FR CRP, creatinine, ferritin, fructosamine, glucose, GGT, HbA1c, IgA, IgE,	
	IgG, IgM, LDH, lipase, lithium, ASO, lipoprotein(a), ApoA1, ApoB, microalb.,	
	magnes., myoglobin, sodium, prealbumin, phosphorus, potas., RF, iron, phenobarbital, phenytoin, digoxin, digitoxin, theophylline, gentamicin, valp.	
	acid, carbamazapine, transferrin, TIBC, total protein, triglycerides, uric acid,	
	BUN/urea, urinary protein, zinc, ISE Na, others	
Tests cleared but not clinically released	_	
Tests not available in U.S. but submitted for FDA 510(k) clearance	_	NT-proBNP, influenza A/B
Tests not available in U.S. but available in other countries Research-use-only assays/Tests in development		NT-proBNP, BNP —/—
Trootation use only assays/rests in utvellepilitiit	*acetic acid, Apo E, Apo CIII, Apo CII, ApoAII, alpha-1-antitryp, $lpha$ -1-acid glycoprotein, bile acids, butyryl choline., others/—	,
User-defined methods implemented for what analytes	acetaminophen, drugs of abuse, salicylate cyclosporine, alcohol,	_
	glycerol-3-phosphate, oxidase, phospholipids, maltose, T4, T-uptake	
Methods supported/Immunoassay methods	photometry, potentiometry (ISE), immunoturbidimetry, latex-enhanced	immunoassay/quantitative lateral flow immunochromatographic
толючэ эирропалинниновэзау насшоиз	immunoturbidimetry/—	assay
No. of direct ion selective electrode channels	3 Na ⁺ , K ⁺ , CL ⁻	none
Must load separate reag. pack for each	no/50 to 2,205	no/—
specimen/No. of diff. assays in pack	no	no
Separate reag. pack for each test run No. of different measured assays onboard simultaneously	no 30	no 1
No. of different assays programmed, calibrated at once	30 60	50
No. of user-definable (open) channels/No. active simultaneously	/60	0/—
No. of different analytes for which system accommodates	27/71 to 1,053	1/—
reag. containers onboard at once/Tests per container set	8 hr/30 days/yee /0°C to 15°C\	na//no
Shortest/Median onboard reag. stability/Refrigerated onboard Multiple reag. configurations supported	8 hr/30 days/yes (8°C to 15°C) yes	na/—/no no
Reag. container placed directly on system for use	yes yes	110
Instrument has same capabilities when 3rd-party reag. used	yes	no .
Reag. only cost per reportable result for standard chemistries/	-/-/-	—/—/—
Therapeutic drugs/Special analytes Walkaway capacity in minutes/No. of specimens/No. of tests-assays	—/40/—	test performed immediately
System is liquid, dry, or reconstituted onboard	liquid	dry
Uses disposable cuvettes/Max. No. stored	no/45	no no
Uses washable cuvettes/Replacement frequency	yes/5 years	no/—
Minimum sample volume aspirated precisely at one time Supplied with UPS (backup power)/Requires floor drain	2 μL no/no	na yes/no
Requires dedicated water system/Water consumption in L per hour	yes/7.5 L daily	no/—
Noise generated in decibels	60	na
Dedicated pediatric sample cup/Dead volume	yes/20 µL	no/—
Primary tube sampling/Pierces caps on primary tubes Sample bar-code reading capability/Autodiscrimination	yes/no yes, on sample transport, shortly before sample is aspirated (2 of 5	no/no
Sample bar-code reading capability/Autodiscrimination	interleaved, UPC, Codabar, codes 39 & 128)/yes	yes/yes
Reagent bar-code reading capability	yes	yes
Bar-code placement per CLSI standard Auto2A	_	_
Onboard test auto inventory (determines volume in container)	yes	na /vac/
Measures No. of tests remaining/Short sample detection/Clot detection Automatic detection of adequate reag. for aspir. & analysis	yes/yes/no yes	—/yes/—
Hemolysis/Turbidity detection-quantitation	yes/yes	_/ _
Dilution of patient samples onboard/Automatic rerun capability	yes/yes	no/no
Sample volume can be reduced to rerun out-of-linear-range high results/	yes/yes	—/ —
Increased to rerun out-of-linear-range low results Autocalibration or autocalibration alert	yes	yes
Calibrants stored onboard/Multipoint calibration supported	no/yes	na/na
Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse	daily/28 days/7 days/—	/once per reagent lot-automatic//-
Automatic shutdown/Startup programmable	no/yes	yes/no
Stat time to completion of all analytes, throughput per hr. for:		
• Sodium, potassium, chloride, TCO ₂	—, 270 specimens	na
• Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine	—, 315 specimens	na
Album., direct & total bili., AST, ALT, ALP Typical time delay from arrhying start toot to apply of comple	—, 180 specimens	na
Typical time delay from ordering stat test to aspir. of sample How often QC required/Onboard SW capability to review QC	60 sec shortest: daily; longest: at customer discretion/yes	— per local requirements/yes
Onboard real-time QC/Support multiple QC lot Nos. per analyte	yes/yes	yes/na
QC results transferred automatically to LIS	yes	yes
Data mant, canability/Instrument wander aumulies LIC interfess	onhoard/no	no/no
Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and	onboard/no —	no/no Telcor, Aegis POC
running in active user sites		
Bidirectional interface capability	yes (host query)	no
Test results transmitted to LIS as soon as chem. time complete	yes	yes
LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results	yes no	yes —
How labs get LOINC codes for reagent kits	—	_
now labs get conto codes for reagent kits		
Lab can control analyzer remotely		no
	no	no no
Lab can control analyzer remotely		
Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component	no/yes/yes	no/—/—
Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting	no/yes/yes within 24 hr/yes	no/—/— na/yes
Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modern servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures	no/yes/yes within 24 hr/yes —/—	no/—/— na/yes —/overnight replacement
Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting	no/yes/yes within 24 hr/yes	no/—/— na/yes
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Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module	no/yes/yes within 24 hr/yes —/— daily: 5 min; weekly: 15 min no/no	no/—/— na/yes —/overnight replacement na no/—
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Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail.	no/yes/yes within 24 hr/yes —/— daily: 5 min; weekly: 15 min no/no 3 days on site/yes — comprehensive clinical & research test menu, benchtop, low water	no/—/— na/yes —/overnight replacement na no/— 1 day on site/no na two levels of control performed with every test; Ramp ratio
Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d)	no/yes/yes within 24 hr/yes —/— daily: 5 min; weekly: 15 min no/no 3 days on site/yes —	no/—/— na/yes —/overnight replacement na no/— 1 day on site/no na

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Times an entire of the 12 st 20 formation designed. The manufaction of between the U.S. Of an entire of the 12 st 20 formation designed. The manufaction of between the U.S. Of an entire of the third of third of the third o	List price/No. of analyzers sold in 2006 No. units in clinical use in U.S./Outside U.S. Country where designed/Manufactured/Where reagents manufactured Operational type/Reagent type	\$175,000/— >2,000/2,000 Switzerland/Switzerland/U.S. & Germany	\$85,000/30 >50/>600 Europe/Europe/United States random access/self-contained single-use cartridges/ packages/slides
Secretary of the control of the cont			
Train character lab and chiefully indicated in the process of the	Tests available on instrument in U.S.	C4, cerul., CRP latex, CRP(hs), hapt., IgA/G/M, myo., prealb., RF, transferr., amph., barb., benz., coca., ethanol, LSD, meth., methaq., opia., PCP, PPX, S barb., S benz., THC, ACPP, ALP, ALT, α-amy. pancreatic, AP, AST, cholinest., CK-MB, γ-glutamyltrans., LDH, lipase, alb., bil direct & total, Ca., chol., CO ₂ , creat. jaffe, creat. enzy., fructosam., gluc., HbA1c, HDL direct, iron, lact., LDL direct, Mg, ammon., phos., TP, TPU-C, trig., UA, UIBC, urea, Na, K, Cl, Li, acet., amik., carb., dig., gent., lido., NAPA, pheno., pheny., prim., proc., quin., sali.,	bilirubin, calcium, cholesterol, CK, creatinine, Gamma-GT, glucose-HK, D-HDL, iron, phosphorus, LDH-L, magnesium, total protein, triglycerides, urea nitroger
Trains not markellable in U.S. of the reliable in other countries Executive-second pages (Trains in ordinate)		none	
Interactive-co-only assays/Tachi in development (incorded methodos) All officials apported/manurassay methods All officials apported			
selection is supported immonastery methods so of direct on selective clostwine channels And talk land apparent page but for each control or selective clostwine channels And talk land apparent page but for each control or selective clostwine channels And talk land apparent page but for each control or selective clostwine channels And talk land apparent page but for each control or selective clostwine channels And different encourage page but for each control or selective close page but applications for series CSF 30 selective close page but application	Research-use-only assays/Tests in development		none/drugs of abuse
No. of the Control and Control	user-defined methods implemented for what analytes		none
* Substitution flow and programmed, calcular for earth of the company flowers of the compan			
**Signature resp. pack for each test run in continuation cases and cannot a stay and cannot	Must load separate reag. pack for each	•	
tion of inflement assessymment, calabration of comparison of the c		no	no
No. of inflement analysis or winder a person and commentations of the commentation of	No. of different measured assays onboard simultaneously	36 tests plus applications for urine & CSF	30
risas, continense ciniciant al concert facts per container set soft interest and provided to 12 verelarly interest to 12	No. of user-definable (open) channels/No. active simultaneously	0/0	0/available on request
Skories/Michain onboard race, schaliny/Refigerated onboard Note of the Michain on board race, schaliny/Refigerated or board Note of the Michain on board race, schaliny/Refigerated or board Note of the Michain or scholar or schol		36/50–800 tests, cassettes	30/150 per container
Reage, containing paleod directly on system for use of similar similar this same containing paleod directly on system for use of similar similar this same contained of the mission of similar this standard demands of the similar similar this same contained of the similar similar this standard demands of the similar similar similar this standard demands of the similar simil	Shortest/Median onboard reag. stability/Refrigerated onboard		
instrument has same capabilities within 24-party raps, used Thereporties despits Special analysis Fig. only cost per reportable result for standard cleanisaties Thereporties days Special analysis Fig. only cost per reportable result for standard cleanisaties Thereporties days Special analysis Thereporties days Special analysis Thereporties days Special analysis Thereporties days Special analysis The control of the cost of the			
Therespetic drugs/Special analytes Wildowney capacity in minutes/flux of specimens/flux of tests-assays Wildowney capacity in minutes/flux of specimens/flux of tests-assays Wildowney capacity in minutes/flux of specimens/flux of tests-assays Wildowney capacity in minutes/flux of specimens/flux of tests analytic specimens will be a specimens	Instrument has same capabilities when 3rd-party reag. used	no	yes
System is liquid for reconstituted orboard sizes dispusable outsetts false. No school year 1,500 no 10 year	Therapeutic drugs/Special analytes		<i></i>
Liber disposable curetten/face. No. stored Liber disposable curetten/face. No. stored Liber with similar sample volume aspirated procisely at one from a page for the received process for drain of the person of th			
Minimum sample volume aspirated precisely at one time toguirus delicated water system/Water consumption in Lper hour toguirus delicated water toguirus delicated water system/Water consumption in Lper hour toguirus delicated water	Uses disposable cuvettes/Max. No. stored	•	
Supplied with IPS (backup power)/Requires floor drain (applied with IPS (backup power)/Requires floor drain (backup system/Water consumption in per hour (backup expetite system/Water consumption in per hour (backup expetite system/Water system/Water system/Water system/Water (backup expetite system/Water system/Water (backup expetite			
Notice generated in decibels Decided poderation ample cup/Decide volume Prithary the sampling/Prierces cape on primary babes Sample har-code nating capability/Prinderces would min continent yes Personal power of the code of sample decideolor/Cit decicion Automatic decident of adequate reage, for sample decideolor/Cit decicion Automatic decident of adequate reage of sample on decident or reage high resultivity Increased to rerun out-of-finenc-range low results Ves Subtractions stored onboard/fulliplipotit cultification supported yes Yes Yes Yes Yes Yes Yes Yes	Supplied with UPS (backup power)/Requires floor drain	no/no	yes/no
Deliciated politario sample curp/beat volume		no/2 L maximum —	
Sample har-ook reading capability/Autodiscrimination Reagent har-ook reading capability and standard Auto2A Reagent har-ook reading capability yes Rear-ook placement per CLS standard Auto2A Rear-ook per Rear-ook	Dedicated pediatric sample cup/Dead volume		no/—
Bas-code placement per CLSI standard AutoZA Measures No. of tests remaining/Short sample defection/Clot defection / respire to a standard submit of adequate resp. for a spir. 8 analysis on no/no Measures No. of tests remaining/Short sample defection/Clot defection / respire to a spire of a spire		•	
Onboard test auto inventory (eletermines volume in container) Measures No. of test smalling/Shrat sample detection/Clot detection Automatic detection of adequato reag. for aspir. & analysis Hemojase/Turbidi detection of adequato reag. for aspir. & analysis Hemojase/Turbidi detection of adequato reag. for aspir. & analysis Hemojase/Turbidi detection of a process of term out-of-linear-range light results/ Increased to rerun out-of-linear-range low results Huncacilization or autocalization at supported yes/yes Ves/yes Ve			
Automatic detection of adequate reag, for aspir, & analysis no/no	Onboard test auto inventory (determines volume in container)	yes	yes
Hemolysis/Turbidity detection-quantitation on no/no no/no no/no no/no no/no publication plates transples onboard/Authoratic rerun capability sample wollowing can be required for erun out-of-linear-range high results/ Increased for remu out-of-linear-range high results/ Increased for remu out-of-linear-range high results/ Increased for remu out-of-linear-range high results/ publication after the notion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls, frequency for ISE/Metabolites/Ther, drugs/Drugs of abuse show the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls, included the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls, the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, potassum, chloride, TO2, suppose, unexported typical calls the completion of all analytes, throughput per hr. for: **Softum, pot		yes/yes/yes —	
Sample volume can be reduced to return out-of-linear-range high results/ part canceased for range low results/ subcoalibration and und-of-linear-range low results/ yes yes yes/yes and calcibration and und-of-linear-range low results yes yes yes/yes and proposed typical calibration on obnoard/fultipolitic alibration supported yes/yes and undown obnoard/fultipolitic alibration supported yes/yes shutdown/Slartup programmable shutdown/Slartup programmable shutdown/Slartup programmable yes/yes yes/yes/yes/yes/yes/yes/yes/yes/yes/yes/			
Autocalibration or autocalibration alert Calibrant stored nobard/Multipolint calibration supported Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse Automatic shutdown/Startup programmable Stat time to completion of all analytes, throughput per hr. for: Sodium, potassium, chloride, TCD, Sodium, potassium,	Sample volume can be reduced to rerun out-of-linear-range high results/		
Calibrants stored onboard/Multipoint calibration supported yes/yes Automatic shutdown/Startup programmable Shat time to completion of all analytes, throughput per hr. for: Sodium, potassium, chioride, TCD, Sodium, potassiu		yes	yes
Sodium, potassium, chloride, TCD ₂ Sodium, potassium, chloride, TCD ₂ glucose, urea, creatinine Album, direct & total bili, AST, ALT, ALP Sodium, potassium, chloride, TCD ₂ glucose, urea, creatinine Album, direct & total bili, AST, ALT, ALP Sodium, potassium, chloride, TCD ₂ glucose, urea, creatinine Album, direct & total bili, AST, ALT, ALP Solium potassium, chloride, TCD ₂ glucose, urea, creatinine Album, direct & total bili, AST, ALT, ALP Solium potassium, chloride, TCD ₂ glucose, urea, creatinine Solium conversed automatically to review QC Solium capability/instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability yes (broadcast download & host query) yes Solium conversets simultaneously with running assays yes yes Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits ———————————————————————————————————	Typical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse	yes/yes 5 hr/once per lot/each lot & 12 weeks/each lot & 12 weeks	yes/yes 30 minutes/once per week/once per week/once per week
* Sodium, potassium, chloride, TCD, glucose, urea, creatinine * Album, direct & total bilis, AST, ALT, ALP * Album, direct & total bilis, AST, ALT, ALP * Typical time delay from ordering stat test to aspir. of sample How often CC required/Onboard SW capability to review CC * Onboard real-midble CC to Nos. per analyte CC results transferred automatically to LIS * Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transfired out Dis as soon as chem. time complete LIS interface operates simultaneously with running assays USE LIS Interface operates simultaneously with running assays USE LIONC to transmit orders & results —— ** Control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modern servicing available/Can diagnose own malfunctions/ Determine malfunctioning component Alb personnel daily: none, weekly: 5 min; monthly: none daily: none, weekly: 5 min; monthly: none daily: none, weekly: 5 min; monthly: none verage time to complete maintenance by object and adily: none; weekly: 5 min; monthly: none daily: none; weekly: 5 min; monthly: 15 min. Tening provided with purchase/Advanced oper, training avail. ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Adays on site or 4 days at vendor offices/yes ### Aday	Stat time to completion of all analytes, throughput per hr. for:	360 tasts	1.5 min. 60
* Album, direct & Itala bili, AST, ALT, ALP Typical time delay from ordering stat test to aspir, of sample How often QC required/Onboard SW capability to review QC Obboard real-time QC/Support multiple QC lot Nos, per analyte QC results transferred automatically to LUS yes Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Uses Clorolloc to transmit orders & results How labs get LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of sv. engineer/Onboard error codes for troubleshooting Moant mine between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h77 d) 250 tests 7 min. 12 sec, 50 3 min. 3 min. 12 sec, 50 4 hr/yes yes/yes yes/yes yes/yes yes/yes yes/yes yes/yes yes/yes yes/yes yes	• Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine	369 tests	6 min. 48 sec, 60
How often QC required/Onboard SW capability for review QC yes yes/yes yes/yes/yes with various particular particu	Album., direct & total bili., AST, ALT, ALP		· · · · · · · · · · · · · · · · · · ·
OC results transferred automatically to LIS Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface perates simultaneously with running assays Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits Lab can control analyzer remotely interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard view (12 kg (12 kg) Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) unique reagent cassette eliminates reagent preparation; menu consolidates onboard/— Schylab, LabDaq, Fletcher Flora, Medcom noboard/— Schylab, LabDaq, Fletcher Flora, Medcom noboard pes (Supplied to LS schylab, LabDaq, Fletcher Flora, Medcom noboard pes (Supplied to LS) as soon as chem. time complete yes (Droadcast download & host query) yes (Droadcast download & host query) yes (Droadcast download & host query) yes (Droadc	How often QC required/Onboard SW capability to review QC	24 hr/yes	8 hrs/yes
Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and running in active user sites Bidirectional interface capability Test results transmitted to LIS as soon as chem. time complete LIS interface operates simultaneously with running assays Uses LOINC to transmit orders & results LIS interface operates simultaneously with running assays Uses LOINC codes for reagent kits — Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Destermine malfunctioning component Most interface avail. (or will be) to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) onboard/yes (addt'l cost) Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Schylab, LabDaq, Fletcher Flora, Medcom Pes yes yes yes Lab can control analyzer remotely no no double for sc			
Sidirectional interface capability yes (broadcast download & host query) yes yes Jest results transmitted to LIS as soon as chem. time complete yes yes Jest Eulik Stransmitted to LIS as soon as chem. time complete yes yes Jest LOINC to transmit orders & results — no How labs get LOINC codes for reagent kits — Lab can control analyzer remotely interface avail. (or will be) to automated specimen handling system — Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures ————————————————————————————————————	Data mgmt. capability/Instrument vendor supplies LIS interface Lab information systems with which interfaces are currently up and	onboard/yes (addt'l cost)	onboard/—
Test results transmitted to LIS as soon as chem. time complete Us interface operates simultaneously with running assays yes yes yes yes yes yes ye		yes (broadcast download & host query)	yes
Uses LOINC to transmit orders & results How labs get LOINC codes for reagent kits	Test results transmitted to LIS as soon as chem. time complete	yes	yes
Lab can control analyzer remotely Interface avail. (or will be) to automated specimen handling system Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) yes yes/yes yes/yes/yes yes/yes/yes yes/yes/yes yes/yes/yes yes, guaranteed within 24 hours/yes 10,000 hours/2 hours daily: 5 min.; weekly: 5 min.; monthly: 15 min. yes (includes audit trail of who replaced parts)/yes yes/no 4 days on site or 4 days at vendor offices/yes 4 days on site or 4 days at vendor offices/yes 7,500 permanent couvettes, onboard jet wash/dry system, six minutes to	Uses LOINC to transmit orders & results	_	no
Interface avail. (or will be) to automated specimen handling system — mo Modem servicing available/Can diagnose own malfunctions/ Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures — / Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module yes (includes audit trail of who replaced parts)/yes Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) modem service includes supplied by company) yes/yes/yes yes/yes/yes yes, guaranteed within 24 hours/yes 10,000 hours/2 hours daily: 5 min.; weekly: 15 min.; monthly: 15 min. yes (includes audit trail of who replaced parts)/yes yes/no 4 days on site or 4 days at vendor offices/yes \$7,500 permanent couvettes, onboard jet wash/dry system, six minutes to			
Determine malfunctioning component On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures —/— Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) —/yes —/— daily: 5 min; monthly: 15 min. yes (includes audit trail of who replaced parts)/yes yes/no 5 days at vendor offices/yes 4 days on site or 4 days at vendor offices/yes \$7,500 permanent couvettes, onboard jet wash/dry system, six minutes to			
On-site time of svc. engineer/Onboard error codes for troubleshooting Mean time between failures/To repair failures Average time to complete maintenance by lab personnel Onboard maintenance records/Maint. training demo module Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) —/yes	Determine malfunctioning component	yes/yes/yes	yes/yes/yes
Average time to complete maintenance by lab personnel daily: none; weekly: 5 min; monthly: none daily: 5 min.; weekly: 15 min.; monthly: 15 min. yes/no Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) daily: none; weekly: 5 min; monthly: none yes/no 4 days on site or 4 days at vendor offices/yes 5 days at vendor offices/yes 7,500 permanent couvettes, onboard jet wash/dry system, six minutes to	On-site time of svc. engineer/Onboard error codes for troubleshooting	•	
Training provided with purchase/Advanced oper. training avail. Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) Annual service contract cost (24 h/7 d) Distinguishing features (supplied by company) Adays on site or 4 days at vendor offices/yes \$7,500 permanent couvettes, onboard jet wash/dry system, six minutes to	Average time to complete maintenance by lab personnel	daily: none; weekly: 5 min; monthly: none	daily: 5 min.; weekly: 15 min.; monthly: 15 min.
Distinguishing features (supplied by company) unique reagent cassette eliminates reagent preparation; menu consolidates permanent couvettes, onboard jet wash/dry system, six minutes to	Training provided with purchase/Advanced oper. training avail.		4 days on site or 4 days at vendor offices/yes
	Distinguishing features (supplied by company)		
		*Contact company for complete list	
*Contact company for complete list			

art 10 of 10	Thermo Fisher Scientific Bola Nicholson bola.nicholson@thermofisher.com	Vital Diagnostics 27 Wellington Road
ee accompanying article on page 25	171 Industry Drive Pittsburgh, PA 15275 800-558-9115 www.thermofisher.com	Lincoln, RI 02865 800-345-2822 www.vitaldiagnostics.com
is accompanying a account page 20		
ame of instrument/First year sold in U.S. st price/No. of analyzers sold in 2006	Data Pro PLUS/2005 \$45,800/2	Vitalab Selectra E/— —/—
o. units in clinical use in U.S./Outside U.S.	4/995	7/5,000
ountry where designed/Manufactured/Where reagents manufactured	Argentina/Argentina/Australia	Netherlands/Netherlands/U.S.
perational type/Reagent type	batch, random access, discrete, continuous random access/self-	random access/self-contained multi-use cartridges/packages/slides
ample handling system/Model type	contained multi-use cartridges-packages-slides, open reagent system ring/benchtop	rotor/benchtop
imensions in inches (H x W x D)/instrument footprint	33.5 x 18.5 x 22.8/51.63 sq ft	19 x 45 x 22/8 sq ft
ests available on instrument in U.S.	alb., alk. phos., amy., AST, BUN, Ca., chloride, chol., CK, ${\rm CO_2}$, crea., direct bilirubin, GGT, glucose (HK), HDL, iron, LDH, Mg, phosphorus, total bilirubin, total protein, triglycerides, uric acid	ALT, alkaline phosphatase, albumin, amylase, aspartate transaminase bilirubin direct & total, calcium, CO_2 , chloride, cholesterol, CPK, creatinine, digoxin, direct HDL & LDL, GGT, glucose, total iron, LDL, magnesium, phenobarbital, phenytoin, phosphorus, potassium, total protein, sodium, theophylline, triglycerides, BUN, uric acid, HbA1c
ests cleared but not clinically released ests not available in U.S. but submitted for FDA 510(k) clearance	ISE: Na, K, CI	
ests not available in U.S. but available in other countries	<u> </u>	_
esearch-use-only assays/Tests in development	<u></u>	none/hsCRP
ser-defined methods implemented for what analytes	none	_
ethods supported/Immunoassay methods	photometry, turbidimetry/—	photometry, potentiometry (ISE)/immunoturbidimetric
o. of direct ion selective electrode channels	3	4
Must load separate reag. pack for each specimen/No. of diff. assays in pack	no/na	no
Separate reag. pack for each test run	no	no
o. of different measured assays onboard simultaneously	48	26
o. of different assays programmed, calibrated at once	48	— 6/26
o. of user-definable (open) channels/No. active simultaneously o. of different analytes for which system accommodates	12/12 48/225	6/26 31/—
reag. containers onboard at once/Tests per container set	10, 220	
hortest/Median onboard reag. stability/Refrigerated onboard	—/—/yes	72 hr/7 days/yes (12°C below ambient)
lultiple reag. configurations supported eag. container placed directly on system for use	yes	yes
eag. container piaced directly on system for use istrument has same capabilities when 3rd-party reag. used	yes yes	yes yes
eag. only cost per reportable result for standard chemistries/	—/—/—	—/—/—
Therapeutic drugs/Special analytes	/40/40	400/F0/annuaries - 1-1-4-F00
/alkaway capacity in minutes/No. of specimens/No. of tests-assays ystem is liquid, dry, or reconstituted onboard	—/48/48 liquid	120/50/approximately 1,500 liquid
ses disposable cuvettes/Max. No. stored	yes/80	no/—
ses washable cuvettes/Replacement frequency	yes/once a week	yes/approximately 10,000 tests
linimum sample volume aspirated precisely at one time upplied with UPS (backup power)/Requires floor drain	3 µL	1 μL yes/no
equires dedicated water system/Water consumption in L per hour	no/no no/0.58 L	no/approximately 0.5 L
oise generated in decibels	-	<u> </u>
edicated pediatric sample cup/Dead volume	yes/100 μL	yes/20 μL
rimary tube sampling/Pierces caps on primary tubes ample bar-code reading capability/Autodiscrimination	yes/no yes, on sample transport, shortly before sample is aspirated (2 of 5	yes/no yes, by handheld scanner as tubes are loaded onto instrument (2 of 5
imple bal code reading capability/Adiculsorifilmation	interleaved, Codabar, codes 39 & 128)/—	interleaved, UPC, Codabar, codes 39 & 128)/—
eagent bar-code reading capability	yes	no
ar-code placement per CLSI standard Auto2A nboard test auto inventory (determines volume in container)	— voe	yes
leasures No. of tests remaining/Short sample detection/Clot detection	yes yes/yes/no	yes yes/yes/yes
utomatic detection of adequate reag. for aspir. & analysis	yes	
emolysis/Turbidity detection-quantitation ilution of patient samples onboard/Automatic rerun capability	no/no	no/no
ample volume can be reduced to rerun out-of-linear-range high results/	yes/yes yes/no	yes/yes yes/no
Increased to rerun out-of-linear-range low results	you no	young
utocalibration or autocalibration alert	no ,	yes
alibrants stored onboard/Multipoint calibration supported pical calib. frequency for ISE/Metabolites/Ther. drugs/Drugs of abuse	no/yes 24 hr/lot change/—/—	yes/— 4 hr/7 days/—/—
utomatic shutdown/Startup programmable	no/no	yes/yes
tat time to completion of all analytes, throughput per hr. for: • Sodium, potassium, chloride, TCO ₂	210 samples per hour	8 min, —
• Sodium, potassium, chloride, TCO ₂ • Sodium, potassium, chloride, TCO ₂ , glucose, urea, creatinine	— Compres per neur	6 min, — 10 min, —
Album., direct & total bili., AST, ALT, ALP	-	10 min, —
rpical time delay from ordering stat test to aspir. of sample	less than 60 sec	6 min
ow often QC required/Onboard SW capability to review QC	daily/yes	4 hr/daily
nboard real-time QC/Support multiple QC lot Nos. per analyte	yes/yes	yes/yes
C results transferred automatically to LIS	yes	
ata mgmt. capability/Instrument vendor supplies LIS interface	onboard/no	optional add-on/yes (add'l cost)
ab information systems with which interfaces are currently up and	Antek	_
ınning in active user sites idirectional interface capability	yes (host query)	yes
est results transmitted to LIS as soon as chem. time complete	no	yes
S interface operates simultaneously with running assays	yes	yes
ses LOINC to transmit orders & results ow labs get LOINC codes for reagent kits		
ab can control analyzer remotely terface avail. (or will be) to automated specimen handling system	no no	no no
odem servicing available/Can diagnose own malfunctions/	no/yes/yes	no/yes/yes
Determine malfunctioning component	11.0, 1.00, 1.00	1.0, 130, 100
n-site time of svc. engineer/Onboard error codes for troubleshooting	—/yes	within 24 hr/yes
	—/— daily: 5 min; weekly: 15 min; monthly: 30 min	6 months/4 hr
ean time between failures/To repair failures		daily: 10 min; weekly: 20 min; monthly: 60 min
lean time between failures/To repair failures verage time to complete maintenance by lab personnel		no/ves
ean time between failures/To repair failures	yes/no 3 days on site, 5 days at vendor offices/no	no/yes 5 days on site/yes
lean time between failures/To repair failures verage time to complete maintenance by lab personnel nboard maintenance records/Maint. training demo module	yes/no	