art 1 of 11	American Laboritate A C ** *	American Laboritati A O ** *	A
	American Labor/Lab A.C.M. Inc.	American Labor/Lab A.C.M. Inc.	American Labor/Lab A.C.M. Inc.
	Mike Shiflett mshiflett@americanlabor.org	Mike Shiflett mshiflett@americanlabor.org	Mike Shiflett mshiflett@americanlabor.org
	1308 Broad St., Durham, NC 27705	1308 Broad St., Durham, NC 27705	1308 Broad St., Durham, NC 27705
	919-286-0726 or (tech support) 800-424-0443 www.americanlabor.org & www.labitec.de	919-286-0726 or (tech support) 800-424-0443 www.americanlabor.org & www.labitec.de	919-286-0726 or (tech support) 800-424-0443 www.americanlabor.org & www.labitec.de
	-		-
strument name/first year sold	CD2000/1986	CoaData 4001/FDA clearance pending	CoaLab 6000/available spring 2003
of units installed in U.S./outside U.S.	>500/>1,000	0/<500	0/<500
untry where analyzer designed/manufactured	Germany/Germany	Germany/Germany	Germany/Germany
erational type	batch, discrete	discrete	discrete, batch
agent type erates on whole blood or spun plasma	open reagent system (reconst. manually)	open reagent system (reconst. manually)	cuvette bar-open reagent system
mple handling system	spun plasma cuvette, semiautomated	spun plasma cuvette, semiautomated	spun plasma automated
niple nanding system odel type	benchtop	benchton	benchtop
mensions (H x W x D)/weight/instrument footprint	5 x 12 x 8.5 in/9.2 lbs/1 sq ft	11 x 14 x 5 in/9 lbs/—	28 x 18 x 22 in/44 lbs/—
A-cleared clotting-based tests	PT, PTT, fib., any citrated plasma clot-based assay	FDA clearance pending	FDA clearance pending
· /			,
A cleared chromogenic tests	none		
A-cleared immunologic tests her FDA-cleared tests	none none		
er-defined tests in clinical use	none		
sts submitted for 510(k) clearance	none		
sts in development but not yet submitted	none		PT, APTT, fib. (FDA pending)
ethodologies supported	clot detection, optical; turbodensitometry stir bar	optical-turbodensitometry	optical-turbodensitometry
	mixing-optical detection		
er. must load sep. reag. pack for ea. specimen/test run	no/no	no/no	1st batch only
of different measured assays onboard simultaneously	2 (PT, APTT)	1	up to 7
of different assays programmed and calibrated at one time	1 (fib.)	1	all
. of user-definable (open) channels	2	4	6
those defined, No. active simultaneously	2	4	all
ctor assays require manual manipulation or dilutions	yes	yes 4/1	no 6/1
. of reag. containers onboard at one time/tests per container	5 or more/ reag. mftr. dependent	4/1	6/1
agents refrigerated onboard	NO NOS	no vee	no vec
Iltiple reag. configurations supported	yes	yes	yes
ag., consumables loaded without interrupting testing	yes	yes	yes
me capabilities when 3rd-party reag. used xx. time same lot number of reag. can be used	yes laboratory dependent	yes mftr. dependent	yes mftr. dependent
alkaway capacity: No. of specimens/No. of tests	no	no	18/3
n. sample vol. aspirated precisely at one time	manual pipetting	manual	50 μL
andard specimen vol. required to run PT or PTT/factor VIII activity	50 μL, min. 50 μL/50 μL, min. 50 μL	50 μL, min. 50 μL/50 μL, min. 50 μL	50 μL, min. 50 μL/50 μL, min. 50 μL
sposables used/price of each	500 microcuvette w/ mixers in travs/11.6¢ ea., bulk	microcuvette (150-250) UL 7¢ ea.; 2,304 pipette tips	cuvette rack w/ 6 cuvettes (125–250)/7¢ ea.
production access prices of calcin	11¢ ea.; 500 macrocuvette w/ mixers in trays/12¢ ea.,	trayed/5.1¢ ea., 3,000 tips bulk/3.9¢ ea.	041010 140K 117 0 0410100 (120 200)/14 041
	bulk 10.6¢ ea.; 2,304 pipette tips-trayed/5.1¢ ea., 3,000		
	tips bulk/3.9¢ ea.		
pports direct-from-track sampling	no	no	no
imary tube sampling supported/pierces caps on primary tubes	no/no	no/no	no/no
mple bar-code reading capability	no	no	yes
agent bar-code reading capability	no	no	yes
board test automatic inventory	no	no	yes
easures No. of tests remaining	no	no	no
ort sample detection	no no	no	yes
ot detection as preanalytical variable in plasma sample	no	no	no
to. detection of adequate reag. for aspir. & anal.	no no	no	yes
molysis/turbidity detection-quantitation	no/no	no/no	no/no
lution of patient samples onboard	no no	no	yes
tomatic rerun capability/auto reflex testing capability	no/no	no/no	no/no
g time during which hypercoagulable samples will not be detected	yes (3 sec)	yes (3 sec)	yes (3 sec)
ad time extended for prolonged clotting times	yes, up to 999 sec	yes, up to 999 sec (selectable on menus)	yes, up to 999 sec (selectable on menus)
er can set different-than-standard:			
Reag. volumes/sample volumes	yes/yes	yes/yes	yes/yes
lo. and sources of reag.	yes	yes	yes
ncub. times/reading times	yes/yes	yes/yes	yes/yes
tocalibration or autocalib. alert/multipoint calibration supported	no/no	no/no	no/no
to shutdown/auto startup programmable	no/no	no/no	no/no
at time to completion of all analytes and throughput per hour for:			
T alone	120 sec/user defined	120 sec/open, reag. mftr. defined	>120 PT, open, reag. mftr. defined
PT, PTT	240 sec/user defined	240 sec/open, reag. mftr. defined	open, reag. mftr. defined
ibrinogen	300 sec/user defined	300 sec/open, reag. mftr. defined	open, reag. mftr. defined
actor VIII activity assay	300 sec/user defined	300 sec/open, reag. mftr. defined	open, reag. mftr. defined
ne delay from ordering stat to aspir. of sample	none—all preanalytical	none	<60 sec
to. transfer of QC results to LIS	no	no	yes
ta management capability	no	no	yes
erface supplied by instrument vendor erfaces in active user sites for:	no	no	yes
erraces in active user sites for: firectional interface capability	call technical support for inquiry	call technical support for inquiry	call technical support for inquiry no
sults transferred to LIS as soon as test time complete	no yes	no no	no yes—end of run
INC codes transmitted with all results	no	10	yes—end of rull no
w labs get LOINC codes for reagent kits	n/a	n/a	n/a
ectronic interface available (or will be) to automated	yes	no	no
or robotic) specimen handling system	•		
dem servicing	NO doile 20 coo from check cloth elegation) weekly 20	NO doile E min weekly 15 min monthly 15 min	NO dollar E mini wookka 15 min montha 15 min
ne required for maintenance by lab personnel	daily: 30 sec (temp. check, cloth cleaning); weekly: 30 sec; monthly: 5 min (temp. calib. if needed)	daily: 5 min; weekly: 15 min; monthly: 15 min	daily: 5 min; weekly: 15 min; monthly: 15 min
board maintenance records	no	no	no
aining provided with purchase	videotape; on-site training extra	yes	yes
prox. No. of training hours needed per tech	2 h	2 h	2 h
	\$4,200, special pricing available upon written request	TBD	TBD
st price	for quotation	TBD	TBD
·	additional 2-vr initial contract \$000 (entional)/4		
n. svc. contract cost (24 h/7 d)/warranty with purchase	additional 2-yr initial contract \$900 (optional)/1 yr		
·	smaller clinic; office, private, vet labs	economic, semiautomated coagulation analyzer for	•the smallest automatic coagulation batch analy
in. svc. contract cost (24 h/7 d)/warranty with purchase			

	Di-Mid-land Inc.	Distriction Inc.	Di-Middown Inc.
Part 2 of 11	BioMérieux Inc. Ginny Meihaus ginny.meihaus@na.biomerieux.com	BioMérieux Inc. Ginny Meihaus qinny.meihaus@na.biomerieux.com	BioMérieux Inc. Ginny Meihaus ginny.meihaus@na.biomerieux.co
	100 Rodolphe St., Durham, NC 27712	100 Rodolphe St., Durham, NC 27712	100 Rodolphe St., Durham, NC 27712
	919-620-2000	919-620-2000	919-620-2000
See accompanying article, page 18	www.biomerieux-usa.com	www.biomerieux-usa.com	www.biomerieux-usa.com
	www.bioiiieiieux-usa.com	www.bioiiietieux-usa.com	www.bioineneux-usa.com
Instrument name/first year sold	Coag-A-Mate Max/1999	Coag-A-Mate MTX II/1999 (sold as MTX since 1997)	Coag-A-Mate XM/1989
No. of units installed in U.S./outside U.S.	>185 worldwide	>500 worldwide	>2,000 worldwide
Country where analyzer designed/manufactured	Germany/Germany	Germany & U.S./Germany	U.S./U.S.
Operational type	random access	random access	discrete
Reagent type	open reagent system	open reagent system	open reagent system
Operates on whole blood or spun plasma	spun plasma	spun plasma	spun plasma
Sample handling system	2 rotors (31 positions each)	rotor (32 positions)	manual pipetting into cuvette (4 wells at a time)
Model type	benchtop	benchtop	benchtop
Dimensions (H x W x D)/weight/instrument footprint	15.3 x 40.2 x 28.3 in/134.5 lbs/8 sq ft, 11 w/ PC	19.7 x 30.7 x 21.3 in/100 lbs/5 sq ft, 8 w/ PC	4.6 x 14.7 x 20 in/20 lbs/2 sq ft
FDA-cleared clotting-based tests	PT, APTT, TT, fib., PT & APTT factors	PT, APTT, TT, fib., PT & APTT factor assays	PT, APTT, TT, fib., PT & APTT factor assays
FDA-cleared chromogenic tests	AT III, hep. antifactor Xa	AT III, hep. antifactor Xa, protein C	none
FDA-cleared immunologic tests	none	none (latex immunologic assay in development)	none (latex immunologic assay in development)
Other FDA-cleared tests	none	none	none
User-defined tests in clinical use	PT mix, APTT mix, lupus (dRVVT screen & confirm.),	alpha-2 antiplasmin, plasminogen, PT mix, APTT	none
	reptilase, proteins C & S (clotting), protein C	mix, LMWH (antifactor Xa)	
	(chromo.), APCR, LMWH (antifactor Xa)		
Tests submitted for 510(k) clearance	none	none	none
Tests in development but not yet submitted	_	quantitative D-dimer immunoassay	_
Methodologies supported	clotting, chromogenic assays; photo-optical	clotting, chromogenic assays; photo-optical	clotting assays; photo-optical
Oper. must load sep. reag. pack for ea. specimen/test run	no/no	no/no	no/no
No. of different measured assays onboard simultaneously	10	8	2
No. of different assays programmed and calibrated at one time	40	32	16
No. of user-definable (open) channels	18	up to 32	16
Of those defined, No. active simultaneously	10	8	2
Factor assays require manual manipulation or dilutions	no	no	yes
No. of reag. containers onboard at one time/tests per container	21 cooled, 16 for reagents, 5 for controls/15-160	16 cooled, 12 room temp. total 28/25–200	4/30–100
Reagents refrigerated onboard	yes (18°C)	yes (15°C)	no
Multiple reag. configurations supported	yes	yes	yes
Reag., consumables loaded without interrupting testing	consumables yes, reagents no	no	yes
Same capabilities when 3rd-party reag. used	ves	yes	yes
Max. time same lot number of reag. can be used	12–18 mos	12–18 mos	12–18 mos
Walkaway capacity: No. of specimens/No. of tests	62/232	32/32	4/4
Min. sample vol. aspirated precisely at one time	5 µL	2 μL	n/a
Standard specimen vol. required to run PT or PTT/factor VIII activity	60 μL/10 μL	50 μL/5 μL, min. 2 μL	100 μL/10 μL, min. 10 μL
Disposables used/price of each	cuvette racks, probe cleaner, predilution	cuvette rings, pipettor wash solution, cleaning	cuvettes, stir bars, optional: printer & paper/pric
Dioposition acoust price of outli	strips/prices available upon request	solution/prices available on request	available on request
	outporprioso aranasio apon roquosi	oracon prioro aranazio on roquot	aranasio on roquosi
Supports direct-from-track sampling	no	no .	no _
Primary tube sampling supported/pierces caps on primary tubes	yes/no	yes/no	no/no
Sample bar-code reading capability	yes (2 internal bar-code scanners)	yes	110
Reagent bar-code reading capability	no	no	no
Onboard test automatic inventory	yes	yes	no no
Measures No. of tests remaining	yes	yes	no
Short sample detection	no	no	no
Clot detection as preanalytical variable in plasma sample	no	no	no
Auto. detection of adequate reag. for aspir. & anal.	yes	yes	no .
Hemolysis/turbidity detection-quantitation	no/no	no/no	no/no
Dilution of patient samples onboard	yes	yes	no
Automatic rerun capability/auto reflex testing capability	yes/yes	yes/no	no/no
Lag time during which hypercoagulable samples will not be detected	yes (PT: 9 sec, APTT: 15 sec)	yes (PT: 3 sec, APTT: 5 sec)	yes (PT: 7 sec, APTT: 20 sec)
Read time extended for prolonged clotting times	yes	yes	yes
User can set different-than-standard:			
Reag. volumes/sample volumes	yes/yes	yes/yes	yes/yes
No. and sources of reag.	yes	yes	yes
Incub. times/reading times	no/yes	yes/yes	yes/yes
Autocalibration or autocalib. alert/multipoint calibration supported	yes/yes	yes/yes	yes/yes
Auto shutdown/auto startup programmable	no/no	no/no	no/no
Stat time to completion of all analytes and throughput per hour for:			
PT alone	<7 min/180 results	2 min/90 results	2 min/200 results (manual)
• PT, PTT	<7 min/120–140 results	5 min/60 results	5 min/50 PTT results (manual)
• Fibrinogen	<7 min/140–180 results	2 min/75 results	2–3 min/100 results (manual)
Factor VIII activity assay	<7 min/140 160 165 165 <7 min/120–140 results	5 min/60 results	5 min/50 results (manual)
Time delay from ordering stat to aspir. of sample	<3 min	30–60 sec	≤ 2 min
Auto, transfer of QC results to LIS	yes	ves	no
Data management capability	yes (incl. QC: L-J)	yes (incl. QC: L-J)	no
Interface supplied by instrument vendor	yes (additional cost)	yes (additional cost)	no
Interfaces in active user sites for:	all commonly used LISs in North America	all commonly used LISs in North America	n/a
Bidirectional interface capability	yes	yes	no
	yes	yes	no
			no
Results transferred to LIS as soon as test time complete	no	no	
		no n/a	n/a
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits	no		n/a no
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results	no n/a	n/a	
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC Codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system	no n/a no	n/a no	no
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing	no n/a no	n/a no	no
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel	no n/a no no daily: 5 min; weekly: 30 min; monthly <5 min	n/a no no daily: ~5 min; weekly: ~1 min; monthly: ~5 min	no no daily: none; weekly: ~5 min; monthly: none
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing	no n/a no	n/a no	no
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase	no n/a no no dally: 5 min; weekly: 30 min; monthly <5 min	n/a no no daily: ~5 min; weekly: ~1 min; monthly: ~5 min no	no no daily: none; weekly: ~5 min; monthly: none no
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC Codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records	no n/a no no daily: 5 min; weekly: 30 min; monthly <5 min no 3 days at vendor offices	n/a no no daily: -5 min; weekly: ~1 min; monthly: -5 min no 3 days at vendor offices	no no daily: none; weekly: ~5 min; monthly: none no 1/2 day on site
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC Codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modern servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech	no n/a no no dally: 5 min; weekly: 30 min; monthly <5 min no 3 days at vendor offices 1–2 h/30 min or less for basic operation \$55,000	n/a no no daily: ~5 min; weekly: ~1 min; monthly: ~5 min no 3 days at vendor offices 2~3 h \$49,995	no no daily: none; weekly: -5 min; monthly: none no 1/2 day on site 1-2 h \$5,198
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech	no n/a no no no daily: 5 min; weekly: 30 min; monthly <5 min no 3 days at vendor offices 1–2 h/30 min or less for basic operation	n/a no no daily;5 min; weekly;1 min; monthly;5 min no 3 days at vendor offices 2-3 h	no no daily: none; weekly: ~5 min; monthly: none no 1/2 day on site 1–2 h
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC Codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modern servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech	no n/a no no dally: 5 min; weekly: 30 min; monthly <5 min no 3 days at vendor offices 1-2 h/30 min or less for basic operation \$55,000 \$6,300/1 yr • normalization of PT & APTT assays with other	n/a no no daily; -5 min; weekly; -1 min; monthly; -5 min no 3 days at vendor offices 2-3 h \$49,995 \$7,300/1 yr • normalization of PT & APTT results between	no no daily: none; weekly: ~5 min; monthly: none no 1/2 day on site 1-2 h \$5,198
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modern servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	no n/a no alily: 5 min; weekly: 30 min; monthly <5 min no 3 days at vendor offices 1-2 h/30 min or less for basic operation \$55,000 \$6,300/1 yr • normalization of PT & APTT assays with other BioMérieux automated systems	n/a no no daily: ~5 min; weekly: ~1 min; monthly: ~5 min no 3 days at vendor offices 2~3 h \$49,995 \$7,300/1 yr • normalization of PT & APTT results between BioMérieux automated systems	no no daily; none; weekly: ~5 min; monthly: none no 1/2 day on site 1-2 h \$5,198 depot service (repair)/1 yr • simple to operate: clot detection starts automatically on addition of start reagent
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modern servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	no n/a no no daily: 5 min; weekly: 30 min; monthly <5 min no 3 days at vendor offices 1–2 h/30 min or less for basic operation \$55,000 \$6,300/1 yr • normalization of PT & APTT assays with other BiolMérieux automated systems workhorse analyzer for medium - to high-volume	n/a no no daily: ~5 min; weekly: ~1 min; monthly: ~5 min no 3 days at vendor offices 2~3 h \$49,995 \$7,300/1 yr • normalization of PT & APTT results between BioMérieux automated systems • stat results within 2~5 min	no no daily: none; weekly: ~5 min; monthly: none no 1/2 day on site 1-2 h \$5,198 depot service (repair)/1 yr • simple to operate: clot detection starts automatically on addition of start reagent • flexibility; test params. can be modified to
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modern servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	no n/a no no daily: 5 min; weekly: 30 min; monthly <5 min no 3 days at vendor offices 1-2 h/30 min or less for basic operation \$55,000 \$6,300/1 yr + normalization of PT & APTT assays with other BioMérieux automated systems - workhorse analyzer for medium- to high-volume routine workload	n/a no no daily: -5 min; weekly: -1 min; monthly: -5 min no 3 days at vendor offices 2-3 h \$49,995 \$7,300/1 yr • normalization of PT & APTT results between BioMérieux automated systems • stat results within 2-5 min • flexibility MTX can support new assays easily	no no daily; none; weekly; ~5 min; monthly; none no 1/2 day on site 1-2 h \$5,198 depot service (repair)/1 yr • simple to operate: clot detection starts automatically on addition of start reagent
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	no n/a no no daily: 5 min; weekly: 30 min; monthly <5 min no 3 days at vendor offices 1–2 h/30 min or less for basic operation \$55,000 \$6,300/1 yr • normalization of PT & APTT assays with other BiolMérieux automated systems workhorse analyzer for medium - to high-volume	n/a no no daily: ~5 min; weekly: ~1 min; monthly: ~5 min no 3 days at vendor offices 2~3 h \$49,995 \$7,300/1 yr • normalization of PT & APTT results between BioMérieux automated systems • stat results within 2~5 min	no no daily: none; weekly: ~5 min; monthly: none no 1/2 day on site 1-2 h \$5,198 depot service (repair)/1 yr • simple to operate: clot detection starts automatically on addition of start reagent • Hexibility: ste params. can be modified to

Part 3 of 11 BioMérieux Inc. Gimy Meihaus ginny, meihaus@na biomerieux.com 100 Rodolphe St., Durham, NC 27712 919-620-2000 847-267-533 www.dadebehring.com 1717 Deerfield Rd., Deerfie	d, IL 60015 1717 Deerfield Rd., Deerfield, IL 60015 847-267-5383 www.dadebehring.com Sysmex CA-500/U.S.: 1998 1,130/2,544 Japan/Japan batch, continuous random access
Ginny Meihaus ginny meihaus@no blomerieux.com 100 Rodolphe St, Durham, NC 27712 See accompanying article, page 18 See accompanying article, page 18 Instrument name/first year sold MDA II/1999 No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured Operational Year Operationa	ar@dadebehring.com Jackie Hauser jackie hauser@dadebehring.com 1717 Deerfield Rd., Deerfield, IL 60015 847-267-5383 www.dadebehring.com Sysmex CA-500/U.S.: 1998 1,130/2,544 Japan/Japan batch, continuous random access
See accompanying article, page 18 100 Rodolphe St., Durham, NC 27712 919-620-2000	d, IL 60015 1717 Decrriteld Rd., Decrrield, IL 60015 847-267-5383 www.dadebehring.com Sysmex CA-500/U.S.: 1998 1,130/2,544 Japan/Japan batch, continuous random access
Instrument name/first year sold MDA II/1999 BFT II/U.S.: 1999 No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured U.S./U.S. Commany/Germany Operational type U.S./U.S. Commany/Germany Operates on whole blood or spun plasma Sample handling system Model type Operates on whole blood or spun plasma Sample handling system Model type Ilmensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests Www.biomerieux-usa.com www.dadebehring.com Www.biomerieux-usa.com www.dadebehring.com Www.biomerieux-usa.com www.dadebehring.com Www.biomerieux-usa.com www.dadebehring.com Www.biomerieux-usa.com www.dadebehring.com ### II/U.S.: 1999 No. of units installed in U.S./outside U.S. Eermany/Germany batch open reagent system open reagen	www.dadebehring.com Sysmex CA-500/U.S.: 1998 1,130/2,544 Japan/Japan batch, continuous random access
Instrument name/first year sold MDA II/1999 BFT II/U.S.: 1999 No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured U.S./U.S. Germany/Germany Operational type conditious random access batch open reagent type Oper adjust system Operates on whole blood or spun plasma Sample handling system racks Tacks manual Model type Dimensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests PT screening (moderate & low ISI), PT factors, quick%, PT, APTT, fib.	Sysmex CA-500/U.S.: 1998 1,130/2,544 Japan/ Japan batch, continuous random access
No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured U.S./U.S. Germany/Germany Deprational type Operational type Operates on whole blood or spun plasma Sample handling system Tacks Model type Dimensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests >400 worldwide U.S./U.S. Germany/Germany batch Open reagent system Open	1,130/2,544 Japan/Japan batch, continuous random access
Country where analyzer designed/manufactured U.S./U.S. Confinuous random access confinuous random access open reagent type Operational type Open reagent system Operates on whole blood or spun plasma Sample handling system Model type Inor-standing Dimensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests PT screening (moderate & low ISI), PT factors, quick%, PT, APTT, fib.	Japan/Japan batch, continuous random access
Country where analyzer designed/manufactured U.S./U.S. Confinuous random access confinuous random access open reagent type Operational type Open reagent system Operates on whole blood or spun plasma Sample handling system Model type Inor-standing Dimensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests PT screening (moderate & low ISI), PT factors, quick%, PT, APTT, fib.	Japan/Japan batch, continuous random access
Operational type Continuous random access Open reagent system Operates on whole blood or spun plasma Operates on whole blood or spun plasma Spun plasm	batch, continuous random access
Operates on whole blood or spun plasma Sample handling system racks manual Model type floor-standing Dimensions (H x W x D)/weight/instrument footprint fbor-standing system floor-standing benchtop 58 x 75 x 31 in/840 lbs/18 sq ft w/PC 3.9 x 7.9 x 11.8 in/8.4 lbs/1.5 FDA-cleared clotting-based tests PT screening (moderate & low ISI), PT factors, quick%, PT, APTT, fib.	
Sample handling system racks manual model type floor-standing benchtop 58 x 75 x 31 in/940 lbs/18 q ft w/PC 33 x 7.9 x 11.8 in/8.4 lbs/1.5 FDA-cleared clotting-based tests PT screening (moderate & low ISI), PT factors, quick%, PT, APTT, fib.	
Sample handling system racks manual model type floor-standing benchtop 58 x 75 x 31 in/940 lbs/18 q ft w/PC 33 x 7.9 x 11.8 in/8.4 lbs/1.5 FDA-cleared clotting-based tests PT screening (moderate & low ISI), PT factors, quick%, PT, APTT, fib.	for Dade Behring instruments spun plasma
Model type floor-standing benchtop Dimensions (H x W x D)/weight/instrument footprint 58 x 75 x 31 in/840 lbs/18 sq ft w/PC 3.9 x 7.9 x 11.8 in/8.4 lbs/1.5 FDA-cleared clotting-based tests PT screening (moderate & low ISD), PT factors, quick%, PT, APTT, fib.	10-tube position sample rack
FDA-cleared clotting-based tests PT screening (moderate & low ISI), PT factors, quick%, PT, APTT, fib.	benchtop
	5 sq ft 19 x 21 x 18.5 in/99 lbs/9 sq ft
	PT, APTT, fib., TT, factor assays, reptilase time,
ra i i surveiling, ra i i factoro, i i fillo, ra i i fillo, ra i i fillo,	protein C
FDA-cleared chromogenic tests hep. antifactor Xa, AT III, protein C, plasminogen, none alpha-2 antiplasmin, lupus (dRVVT screen and	AT III, protein C chromo, heparin
confirm.), APCR	
FDA-cleared immunologic tests D-dimer (latex immunoassay) none	none
Other FDA-cleared tests none none	none
User-defined tests in clinical use clottable C & S, PNP, P & P (1 & 2), WWF, open none assays-user definable for clotting, chrom. &	n/a
assays-user demander of columy, chrom. &	
Tests submitted for 510(k) clearance none none	none
Tests in development but not yet submitted none none	n/a
Methodologies supported clotting; chromogenic; immunoassay; photo-optical clot detection, opto-mechan	nical clot detection: optical light scatter, chromogenic
Oper. must load sep. reag. pack for ea. specimen/test run no/no no/no	no/no
No. of different measured assays onboard simultaneously 16 1 No. of different assays programmed and calibrated at one time 72 3	5 7
No. of otherent assays programmed and cambrated at one time 72 3 No. of user-definable (open) channels 20 n/a	7
Of those defined, No. active simultaneously 16 1	5
Factor assays require manual manipulation or dilutions no n/a	n/a
No. of reag. containers onboard at one time/tests per container 30/25-400 4/up to 2,000 Reagents refrigerated onboard yes (8-15°C) no	10/varies, up to 200 yes (15°C)
Multiple reag. configurations supported yes yes	yes
Reag., consumables loaded without interrupting testing consumables yes, reagents no yes	consumables yes, reagents no
Same capabilities when 3rd-party reag. used yes yes Max. time same lot number of reag, can be used 12–18 mos 12 mos	yes 12 mos
Max. time same lot number of reag. can be used 12-18 mos 12 mos Walkaway capacity: No. of specimens/No. of tests 170/480 1/1	12 1108
Min. sample vol. aspirated precisely at one time 5 μL 50 μL	10 μL
Standard specimen vol. required to run PT or PTT/factor VIII activity 50 µL/10 µL 50 µL 50 µL 50 µL 50 µL 50 µL	50 μL/n/a
Disposables used/price of each cuvettes, bar-code labels, MDA probe cleaner/prices cuvettes, printer paper/price available on request	e varies with volume reaction tubes, CA clean I, thermal paper/price varies with volume
Supports direct-from-track sampling no no Primary tube sampling supported/pierces caps on primary tubes yes/yes no	no yes (3–5 mL)/no
Sample bar-code reading capability yes (internal bar-code scanner) no	yes (3-5 IIIL)/IIU
Reagent bar-code reading capability yes no	no
Onboard test automatic inventory yes no Measures No. of tests remaining yes no	yes
Measures No. of tests remaining yes no Short sample detection yes no	yes yes
Clot detection as preanalytical variable in plasma sample no no	no
Auto. detection of adequate reag. for aspir. & anal. yes no	yes
Hemolysis/turbidity detection-quantitation yes/yes (detects bilirubin, corrects for lipemia) no/no Dilution of patient samples onboard yes no	no/yes yes
Automatic rerun capability/auto reflex testing capability no/no no/yes	no/no
Lag time during which hypercoagulable samples will not be detected yes (PT: default 3 sec, APTT: default 5 sec) yes (PT: 5 sec, APTT: 15 sec)	
Read time extended for prolonged clotting times yes (selectable on menus) no User can set different-than-standard:	yes (selectable on menus)
Reag. volumes/sample volumes yes/yes yes/yes yes/yes	yes/yes
No. and sources of reag. yes yes	yes
• Incub. times/reading times no/yes yes/yes	yes/yes
Autocalibration or autocalib. alert/multipoint calibration supported yes/yes yes/yes Auto shutdown/auto startup programmable yes/yes no/no	—/yes no/no
	.10) 110
Stat time to completion of all analytes and throughput per hour for: • PT alone 12 min/180 results 1 min/n/a manual	7 min/50 specimens
PT alone	7 min/50 specimens 8 min/33 specimens
• Fibrinogen 12 min/180 results <1 min/n/a manual	7 min/50 specimens
Factor VIII activity assay 12 min/180 results n/a Time delay from addition that to coming a complete 1/2	n/a/n/a
Time delay from ordering stat to aspir. of sample <1 min n/a Auto. transfer of QC results to LIS yes no	2 min yes
Data management capability onboard (incl. QC: L-J, Westgard) no	onboard (incl. QC: L-J)
Interface supplied by instrument vendor yes (additional cost) n/a	no
Interfaces in active user sites for: all commonly used LISs in North America n/a Bidirectional interface capability yes (broadcast download & host query) no	Cerner, Sunquest, others yes (host query)
Results transferred to LIS as soon as test time complete yes no	yes (nost query) yes
LOINC codes transmitted with all results no no	no
How labs get LOINC codes for reagent kits n/a —	-
Electronic interface available (or will be) to automated yes no (or robotic) specimen handling system	no
Modem servicing yes no Time required for maintenance by lab personnel daily: -35 min; weekly: 45 min; monthly: 10 min daily: 1 min	no daily: √5 min
Time required for maintenance by lab personnel daily: ~35 min; weekly: 45 min; monthly: 10 min on	daily: <5 min no
Training provided with purchase 3-5 days on site, 4 days at vendor offices video	2 days on site
Approx. No. of training hours needed per tech 4-5 h 2 h	2 h
List price \$92,295 \$6,877.50	\$34,474.65
Ann. svc. contract cost (24 h/7 d)/warranty with purchase \$12,600/1 yr depot service (repair)/1 yr	\$4,962/1 yr
Unique advantages • patented waveform analysis technology with flags for • 2-channel micro reagent vol	n accurate on lipemic, clotting/chromogenic
identifying abnormal waveforms (e.g., biphasic samples) • opto-mechanical detection	
identifying abnormal waveforms (e.g., biphasic samples) • opto-mechanical detection • sensitive quantitative D-dimer assay for use in icteric samples	small footprint, complete automation surve storage built-in show-operating expense
identifying abnormal waveforms (e.g., biphasic samples) • opto-mechanical detection	

/		mrany zer e	
Part 4 of 11	Dade Behring Inc. Jackie Hauser jackie_hauser@dadebehring.com	Dade Behring Inc. Jackie Hauser jackie_hauser@dadebehring.com	Dade Behring Inc. Jackie Hauser jackie_hauser@dadebehring.com
See accompanying article, page 18	1717 Deerfield Rd., Deerfield, IL 60015 847-267-5383 www.dadebehring.com	1717 Deerfield Rd., Deerfield, IL 60015 847-267-5383 www.dadebehring.com	1717 Deerfield Rd., Deerfield, IL 60015 847-267-5383 www.dadebehring.com
Instrument name/first year sold	Sysmex CA-1500/U.S.: 2000/worldwide: 1999	BCS/U.S.: 1998	Sysmex CA-7000/2002
No. of units installed in U.S./outside U.S.	482/275	276/927	2/40
Country where analyzer designed/manufactured	Japan/Japan	Germany/Germany	Japan/Japan
Operational type	continuous random access	batch, continuous random access	continuous random access
Reagent type	open reagent system (lyoph., reconst. manually),	open reagent system (reconst. manually), optimized	open reagent system
neagent type	optimized for Dade Behring instruments	for Dade Behring instruments	open reagont system
Operates on whole blood or spun plasma	spun plasma	spun plasma	spun plasma
Sample handling system	10-tube position sample rack x 5	rack	rack
Model type	benchtop	benchtop	benchtop
Dimensions (H x W x D)/weight/instrument footprint	20 x 31.2 x 31.2 in/186 lbs/6.8 sq ft	37 x 49 x 25 in/330 lbs/14 sq ft	24.8 x 42 x 43.8 in/345.4 lbs/12.78 sq ft
FDA-cleared clotting-based tests	PT, APTT, fib., factor assays, protein C, reptilase time,	PT, APTT, fib., TT, factor assays, reptilase time,	PT, APTT, fib., factor assays, protein C clotting, TT,
	thrombin time	protein C, dRVVT screen & confirm., factor V Leiden	Lupus, dRVVT, batroxobin
FDA-cleared chromogenic tests	protein S activity, AT III, plasminogen, factor VIII	AT III, alpha-2 antiplasmin, plasminogen, protein C	protein S activity, heparin AT III, factor VIII chromogenic,
	chromo, alpha-2 antiplasmin, protein C chromo, heparin	chromo, heparin, protein S activity	plasminogen, alpha-2 antiplasmin, protein C chromogenic
FDA-cleared immunologic tests	advanced D-dimer	advanced D-dimer	D-dimer
Other FDA-cleared tests	none	BC von Willebrand-ristocetin cofactor assay (agglut.	n/a
		of fixed Plts.)	
User-defined tests in clinical use	n/a	n/a	n/a
Tests submitted for 510(k) clearance	n/a	n/a	n/a
Tests in development but not yet submitted	dRVVT screen and confirm, factor V Leiden	n/a	factor V Leiden assay
Methodologies supported	clot detection, optical, turbidmetric; chromogenic;	clat dataction: antical: vanon flactor lamn	clat dataction antical turbidimatria abrama series
mediodologies supported	immunologic (latex agglutination)	clot detection: optical; xenon flasher lamp; chromogenic; immunologic (ristocetin cofactor)	clot detection, optical, turbidimetric; chromogenic; immunologic (latex, transmitted light)
Oper. must load sep. reag. pack for ea. specimen/test run	no/no	no/no	no/no
No. of different measured assays onboard simultaneously	15	>20 tests/sample (theoretically 9,999)	20
No. of different assays programmed and calibrated at one time	25	99	40
No. of user-definable (open) channels	25	8,999 (Nos. 1–1,000 are factory set & unalterable)	40
Of those defined, No. active simultaneously	15	>100	20
Factor assays require manual manipulation or dilutions	no	no	no
No. of reag. containers onboard at one time/tests per container	39/up to 200	18–78/varies-micro volume assay format	58/varies up to 200
Reagents refrigerated onboard	yes (15°C)	yes (<15°C)	yes (15°C)
Multiple reag. configurations supported	yes	yes	yes
Reag., consumables loaded without interrupting testing	some consumables yes, reagents no	yes	yes
Same capabilities when 3rd-party reag. used	yes	yes	yes
Max. time same lot number of reag. can be used	12 mos	12 mos	12 mos
Walkaway capacity: No. of specimens/No. of tests	50/up to 1,000	110 samples/400 cuvettes	100/550 per hour PT and APTT, 300 per hour PT
Min. sample vol. aspirated precisely at one time	5 μL	5 μL	5 μL
Standard specimen vol. required to run PT or PTT/factor VIII activity	50 μL/10 μL	50 μL, min. 100 μL (incl. dead vols.)/50 μL, min. 100 μL	50 μL/10 μL
Disposables used/price of each	reaction tubes, sample plates, CA clean I & II, system buffer, halogen lamp, closed container sample replacement needles/prices vary with volume	cuvette rotors, washing solution, terralin disinfectant, BC validation kit/price varies with volume	reaction tubes, CA clean I & II, system buffer, halogen lamp, closed container sample replacement needles/prices vary with volume
Supports direct-from-track sampling	yes (Sysmex CST series)	no	yes (custom automation solutions available)
Primary tube sampling supported/pierces caps on primary tubes	yes (3–5 mL)/yes	yes (all up to 100 mm long, ext. diam. 10–16 mm)/no	yes (3–5 mL)/yes
Sample bar-code reading capability	yes	yes	yes
Reagent bar-code reading capability	yes	yes (avail. for user-defined tests)	yes
Onboard test automatic inventory	yes	yes	yes
Measures No. of tests remaining	yes	yes	yes
Short sample detection	yes	yes	yes
Clot detection as preanalytical variable in plasma sample	no	no	no
Auto. detection of adequate reag. for aspir. & anal.	yes	yes	yes
Hemolysis/turbidity detection-quantitation	no/yes	yes/yes	no/yes
Dilution of patient samples onboard	yes	yes	yes
Automatic rerun capability/auto reflex testing capability	yes/yes	yes/yes	yes/yes
Lag time during which hypercoagulable samples will not be detected	yes (PT: 7 sec, PTT: 15 sec)	yes (PT & PTT: 7 sec)	yes (PT: 7 sec, PTT: 15 sec)
Read time extended for prolonged clotting times	yes (selectable on menus)	no	yes (selectable on menus)
User can set different-than-standard:	vee hee	vee hee	vee hise
Reag. volumes/sample volumes No. and sources of reag.	yes/yes	yes/yes	yes/yes
No. and sources of reag. No. and sources of reag.	yes	yes	yes
Incub. times/reading times Autocalibration or autocalib alert/multipoint calibration supported	yes/yes	yes/no	yes/yes
Autocalibration or autocalib. alert/multipoint calibration supported Auto shutdown/auto startup programmable	no/yes no/no	yes/yes no/no	no/yes no/no
Auto onutuowii/auto otai tup programmanid	IIV/IIJ	1107110	HOTHU
Stat time to completion of all analytes and throughput per hour for:			
• PT alone	7 min/80 specimens	<5 min/~350 specimens (incl. abnormals)	7 min/300 specimens
• PT, PTT	8 min/120 specimens	<5 min/~160 specimens (incl. abnormals)	8 min/550 specimens
• Fibrinogen	8 min/80 specimens	<5 min (if curve avail.)/~350 specimens	8 min/300 specimens
Factor VIII activity assay	8 min/n/a	<5 min (if curve avail.)/~280 specimens	8 min/300 specimens
Time delay from ordering stat to aspir. of sample	2 min	varies by test in progress, approx. <5 min	2 min
Auto. transfer of QC results to LIS	yes	yes	yes
Data management capability	onboard (incl. QC: L-J & Westgard)	limited	onboard (incl. QC: L-J & Westgard)
Interface supplied by instrument vendor	no	no	no
Interfaces in active user sites for:	Cerner, Sunquest, others	Cerner, Sunquest, Meditech, others	Cerner, others in development
Bidirectional interface capability	yes (host query)	yes (host query)	yes (host query)
Results transferred to LIS as soon as test time complete	yes	yes	yes
LOINC codes transmitted with all results	no .	no	no
How labs get LOINC codes for reagent kits	n/a	n/a	n/a
Electronic interface available (or will be) to automated	yes (Sysmex CST series)	possible future upgrade (not avail.)	yes (custom automation solutions available)
(or robotic) specimen handling system			
Modem ceruicing	no	VOC	ne .
Modem servicing Time required for maintenance by lab personnel	no daily: <5 min; weekly: <40 min; monthly: 1 min	yes daily: <5 min; weekly: <10 min; monthly: 15 min	no per shift: <5 min; daily: <10 min; weekly: 1 min;
	and the state of t	and the state of t	quarterly: 5 min
Onboard maintenance records	no	no	no
Training provided with purchase	varies on site, 4 days at vendor offices	varies on site, 5 days at vendor offices	varies on site, 5 days at vendor offices
Approx. No. of training hours needed per tech	6 h	8 h on site	8 h on site
List price	\$85,995 standard model; \$97,461 cap-piercing model	\$131,859	\$157,500 standard; \$173,250 with cap piercer
Ann. svc. contract cost (24 h/7 d)/warranty with purchase	\$12,590 standard model; \$13,572 cap-piercing/1 yr	\$18,480/1 yr	\$18,522/1 yr
Unique advantages	adapts easily to lab automation	 continuous loading of bar-coded reagent & samples 	• fastest throughput available for routine testing; PT,
	 simultaneous curve calibrating & patient testing 	 multi-lot, multi-curve reagent management 	APTT results every 7 sec
	 ability to load multiple bottles or multiple lots of 	• PT/APTT/fib./AT III/D-dimer in <10 min	 continuous loading of reagents, consumables, &
	reagent	 simultaneous curve calibration & patient testing 	patient samples without interruption

Part 5 of 11	Diagnostica Stago Inc. Pascal Boulanger pascal.boulanger@stago-us.com 5 Century Dr., Parsippany, NJ 07054	Diagnostica Stago Inc. Pascal Boulanger pascal.boulanger@stago-us.com 5 Century Dr., Parsippany, NJ 07054	Diagnostica Stago Inc. Pascal Boulanger pascal.boulanger@stago-us.com 5 Century Dr., Parsippany, NJ 07054
See accompanying article, page 18	800-222-COAG www.stago-us.com	800-222-COAG www.stago-us.com	800-222-COAG www.stago-us.com
Instrument name/first year sold	STA-R Hemostasis System/1998	STA Hemostasis System/1993	STA Compact Hemostasis System/1996
No. of units installed in U.S./outside U.S.	159/889	210/1,550	669/3,619
Country where analyzer designed/manufactured	France/France	France/France	France/France
Operational type Reagent type	continuous random access open reagent system (lyoph., reconst. manually)	continuous random access open reagent system (lyoph., reconst. manually)	continuous random access open reagent system (lyoph., reconst. manually)
Operates on whole blood or spun plasma	spun plasma	spun plasma	spun plasma
Sample handling system	rack with continuous specimen access	continuous specimen access-primary tube	continuous specimen access-primary tube
Model type Dimensions (H x W x D)/weight/instrument footprint	floor-standing	floor-standing	benchtop
Dimensions (n x w x D)/weight/instrument tootprint	49.2 x 47.6 x 32.2 in/441 lbs/26.8 sq ft	44.7 x 36.6 x 25.8 in/551 lbs/23.5 sq ft	25.2 x 38.8 x 25.8 in/351 lbs/25.6 sq ft
FDA-cleared clotting-based tests	PT, APTT, TT, fib., reptilase, intr. & extr. factors, proteins C & S, lupus anticoag. screen & confirm.	PT, APTT, TT, fib., reptilase, intr. & extr. factors, proteins C & S, lupus anticoag. screen & confirm.	PT, APTT, TT, fib., reptilase, intr. & extr. factors, proteins C & S, lupus anticoag. screen & confirm.
FDA-cleared chromogenic tests	unfrac. hep., LMWH, protein C, AT III, plasminogen & antiplasmin	unfrac. hep., LMWH, protein C, AT III, plasminogen & antiplasmin	unfrac. hep., LMWH, protein C, AT III, plasminogen & antiplasmin
FDA-cleared immunologic tests	D-dimer, vWF, protein S antigen & AT III antigen (microlatex agglut.)	D-dimer, vWF, protein S antigen & AT III antigen (microlatex agglut.)	D-dimer, vWF antigen, protein S antigen & AT III antigen (microlatex agglut.)
Other FDA-cleared tests	none	none	none
User-defined tests in clinical use	all clotting-based, chrom., & immunol, tests can have	all clotting-based, chrom., & immunol. tests can have	all clotting-based, chrom., & immunol. tests can have
	user-def. applications in addition to dRVVT screen. & confirm. assays & activated protein C resistance	user-def. applications in addition to dRVVT screen. & confirm. assays & activated protein C resistance	user-def. applications in addition to dRVVT screen. & confirm. assay & activated protein C resistance
Tests submitted for 510(k) clearance	none	none	none
Tests in development but not yet submitted	none	none	none
Methodologies supported	clotting, chromogenic, & immunological assays	clotting, chromogenic, & immunological assays	clotting, chromogenic, & immunological assays
Oper. must load sep. reag. pack for ea. specimen/test run	no/no	no/no	no/no
No. of different measured assays onboard simultaneously	up to 200	up to 80	up to 80
No. of different assays programmed and calibrated at one time	up to 200	up to 80 70	up to 80 70
No. of user-definable (open) channels Of those defined, No. active simultaneously	200 200	70 70	70 70
Factor assays require manual manipulation or dilutions	no	no	no
No. of reag. containers onboard at one time/tests per container	70/up to 83	45/varies, up to 83	45/varies, up to 83
Reagents refrigerated onboard Multiple reag. configurations supported	yes (15–19°C) yes	yes (15–19°C) yes	yes (15–19°C) yes
Reag., consumables loaded without interrupting testing	yes	yes	yes
Same capabilities when 3rd-party reag. used	yes	yes	yes
Max. time same lot number of reag. can be used	18 mos	18 mos	18 mos
Walkaway capacity: No. of specimens/No. of tests Min. sample vol. aspirated precisely at one time	215/32 per specimen 5 µL	192/12 per specimen 5 µL	96/12 per sample 5 µL
Standard specimen vol. required to run PT or PTT/factor VIII activity	50 μL, min. 50 μL/50 μL, min. 50 μL	50 μL, min. 50 μL/50 μL, min. 50 μL	50 μL, min. 50 μL/50 μL, min. 50 μL
Disposables used/price of each	cuvettes, wash-cleaner solution/—	cuvettes, wash-cleaner solution/—	cuvettes, glycol., wash-cleaner solution/—
Supports direct-from-track sampling	yes	no	no
Primary tube sampling supported/pierces caps on primary tubes	yes/optional	yes/no	yes (5 & 2.5 mL tube sizes)/optional
Sample bar-code reading capability Reagent bar-code reading capability	yes yes (not for user-defined tests)	yes yes (not for user-defined tests)	yes yes (not for user-defined tests)
Onboard test automatic inventory	yes	yes	yes
Measures No. of tests remaining	yes	yes	yes
Short sample detection Clot detection as preanalytical variable in plasma sample	yes no	yes no	yes no
Auto. detection of adequate reag. for aspir. & anal.	ves	yes	yes
Hemolysis/turbidity detection-quantitation	no/no	no/no	no/no
Dilution of patient samples onboard	yes	yes	yes
Automatic rerun capability/auto reflex testing capability Lag time during which hypercoagulable samples will not be detected	yes/yes no	yes/no no	yes/no no
Read time extended for prolonged clotting times	yes (selectable on menus)	yes (selectable on menus)	yes (selectable on menus)
User can set different-than-standard:	una franc	vee here	use has
Reag. volumes/sample volumes No. and sources of reag.	yes/yes yes	yes/yes yes	yes/yes yes
Incub. times/reading times	yes/yes	yes/yes	yes/yes
Autocalibration or autocalib. alert/multipoint calibration supported	yes/yes	yes/yes	yes/yes
Auto shutdown/auto startup programmable	no/no (not needed)	no/no (not needed)	no/no (not needed)
Stat time to completion of all analytes and throughput per hour for:			
• PT alone	<6 min/300 specimens	<6 min/300 specimens	<6 min/150 specimens
• PT, PTT • Fibrinogen	7 min/150 specimens 7 min/180 specimens	7 min/150 specimens 7 min/180 specimens	7 min/75 specimens 7 min/75 specimens
Factor VIII activity assay	7 min/180 specimens 7 min/180 specimens	7 min/180 specimens 7 min/180 specimens	7 min/75 specimens 7 min/70 specimens
Time delay from ordering stat to aspir. of sample	<15 sec	<15 sec	<15 sec
Auto. transfer of QC results to LIS Data management capability	yes	yes	yes
Interface supplied by instrument vendor	onboard (incl. QC: L-J) no	onboard (incl. QC: L-J) no	onboard (incl. QC: L-J) no
Interfaces in active user sites for:	contact marketing for updated list	contact marketing for updated list	contact marketing for updated list
Bidirectional interface capability	yes (host query)	yes (host query)	yes (host query)
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results	yes no	yes no	yes no
How labs get LOINC codes for reagent kits	n/a	n/a	n/a
Electronic interface available (or will be) to automated	yes (contact marketing for list of systems)	no	no
(or robotic) specimen handling system			
Modern servicing	yes	no	10
Time required for maintenance by lab personnel Onboard maintenance records	daily: none; weekly: <30 min; monthly: <30 min yes	daily: none; weekly: <30 min; monthly: <30 min yes	daily: none; weekly: <30 min; monthly: <30 min yes
Training provided with purchase	varies on site, 3 days at vendor offices	varies on site, 3 days at vendor offices	varies on site, 3 days at vendor offices
Approx. No. of training hours needed per tech	2 h basic, 24 h system training at training center	2 h basic, 24 h system training at training center	2 h basic, 24 h system training at training center
List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	\$149,995 prices available on request/1 yr	\$99,845 prices available on request/1 yr	\$75,000 prices available on request/1 yr
Unique advantages	walkaway testing with robotics-capable interface to automated lines for high-volume testing, with touch-screen software & cap piecring option continuous random access for up to 200 test selections with no carryover able to standardze with other STA family of analyzers unique viscosity-based detection system	walkaway testing for routine & specialty hemostasis assays with 45 reap, positions, 192 sample pos., up to 1,000 dispos. curvettes continuous random access for up to 80 test selections with no carryover able to standardize with other STA family of analyzers unique viscosity-based detection system	walkaway testing for routine & specialty hemostasis assays with 45 reag, positions, 96 sample pos., up to 1,000 dispos. cuvettes continuous random access for up to 80 test selections with no carryover able to standardize with other STA analyzers unique viscosity-based detection system

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See accompanying article, page 18	800-222-COAG	800-222-COAG	800-231-5663 www.helena.com
	www.stago-us.com	www.stago-us.com	www.neiena.com
Instrument name/first year sold	Start 4/1998	Start 8/1999	Thor/1997
No. of units installed in U.S./outside U.S.	615/7,159	>20/599	>15/0
Country where analyzer designed/manufactured	France/France	France/France	U.S./U.S.
Operational type	batch	batch	random access
Reagent type Operates on whole blood or spun plasma	open reagent system (lyoph., reconst. manually) spun plasma	open reagent system (lyoph., reconst. manually) spun plasma	open reagent system spun plasma
Sample handling system	manual	manual	6 racks, 10 positions each
Model type	benchtop	benchtop	benchtop
Dimensions (H x W x D)/weight/instrument footprint	4.7 x 16.1 x 16.5 in/12.5 lbs/1.8 sq ft	4.7 x 16.1 x 16.5 in/12.5 lbs/1.8 sq ft	23 x 44 x 28 in/252 lbs/8.5 sq ft
FDA-cleared clotting-based tests	PT, APTT, TT, fib., reptilase, intr. & extr. factors,	PT, APTT, TT, fib., reptilase, intr. & extr. factors,	PT, APTT, fib., thromb. clotting time, factor assays
FDA-cleared chromogenic tests	proteins C & S, lupus anticoag. screen & confirm. none	proteins C & S, lupus anticoag. screen & confirm. none	II, V, VII–XII with 8 user-definable tests none
FDA-cleared immunologic tests	none	none	none
Other FDA-cleared tests	none	none	none
User-defined tests in clinical use	same as clotting-based tests above & dRVVT screen. & confirm. assays & activated protein C resistance	same as clotting-based tests above & dRVVT screen. & confirm. assays & activated protein C resistance	PT, APTT, fib., TCT, factors II, V, VII–XII
	& commin. assays & activated protein c resistance	& commin. assays & activated protein c resistance	
Tests submitted for 510(k) clearance Tests in development but not yet submitted	none none	none none	none drvvt
Methodologies supported Oper. must load sep. reag. pack for ea. specimen/test run	clotting tests no/no	clotting tests no/no	clot detection, optical, turbidimetric no/no
No. of different measured assays onboard simultaneously	1	1	12
No. of different assays programmed and calibrated at one time	20	20	1
No. of user-definable (open) channels Of those defined. No. active simultaneously	1	4	8 12
or those defined, No. active simultaneously Factor assays require manual manipulation or dils	yes	yes	12 no
No. of reag. containers onboard at one time/tests per container	4/varies, up to 100	4/varies, up to 100	11/200
Reagents refrigerated onboard	no voo	no voo	yes (5°C)
Multiple reag. configurations supported Reag., consumables loaded without interrupting testing	yes no	yes no	yes yes
Same capabilities when 3rd-party reag. used	yes	yes	yes
Max. time same lot number of reag. can be used Walkaway capacity: No. of specimens/No. of tests	18 mos	18 mos	12 mos
Walkaway capacity: No. of specimens/No. of tests Min. sample vol. aspirated precisely at one time	4/1 25 μL	4/1 25 μL	60/12 per sample 50 μL
Standard specimen vol. required to run PT or PTT/factor VIII activity	50 μL, min. 50 μL/50 μL, min. 50 μL	50 μL, min. 50 μL/50 μL, min. 50 μL	200 μL, min.100 μL/200 μL, min.100 μL
Disposables used/price of each	cuvettes, beads, ball/—	cuvettes, beads, ball/—	reagent reservoirs & tubing (5 sets) 5 pumps/\$187.75
			per set; cuvettes (4 tests/500)/\$173=11.5¢ per test; biohazard trays/5@\$16.25
Supports direct-from-track sampling Primary tube sampling supported/pierces caps on primary tubes	no no/no (n/a)	no no/no (n/a)	no yes (tube sizes 5 mL and lower)/yes
Sample bar-code reading capability	no (1/a)	no (1/a)	yes (tube sizes 5 IIIL and lower)/yes yes
Reagent bar-code reading capability	no	no	yes (not for user-defined tests)
Onboard test automatic inventory	no no	no no	yes
Measures No. of tests remaining Short sample detection	no no	no no	yes yes
Clot detection as preanalytic variable in plasma sample	no	no	_
Auto. detection of adequate reag. for aspir. & anal.	no no/no	no no/no	yes
Hemolysis/turbidity detection-quantitation Dilution of patient samples onboard	no/no no	no/no no	yes/yes yes
Automatic rerun capability/auto reflex testing capability	no/no	no/no	yes/yes
Lag time during which hypercoagulable samples will not be detected Read time extended for prolonged clotting times	no	no	yes (PT: 4 sec, PTT: 14 sec)
Read time extended for prolonged clotting times User can set different-than-standard:	yes (selectable on menus)	yes (selectable on menus)	yes (selectable on menus)
Reag. volumes/sample volumes	yes/yes	yes/yes	yes/yes
No. and sources of reag. Insulational (reading times)	yes	yes	yes
 Incub. times/reading times Autocalibration or autocalib. alert/multipoint calibration supported 	yes/yes no/yes	yes/yes no/yes	yes/yes no/yes
Auto shutdown/auto startup programmable	no yes	no yes	no/no
Stat time to completion of all analytes and throughput per hour for:			
PT alone	<1 min/up to 120 specimens	<1 min/up to 120 specimens	8 min/ 240 specimens
• PT, PTT	n/a/n/a	n/a/n/a	10 min/144 specimens
• Fibrinogen • Factor VIII activity assay	<1 min/up to 120 specimens varies/varies	<1 min/up to 120 specimens varies/varies	5 min/360 specimens 10 min/144 specimens
Fractor vill activity assay Time delay from ordering stat to aspir. of sample	n/a	n/a	30 sec-1 min
Auto. transfer of QC results to LIS	no	no	yes
Data management capability Interface supplied by instrument vendor	no no	no no	onboard (incl. QC: L-J, Westgard) no
Interface supplied by instrument vehicor Interfaces in active user sites for:	n/a	n/a	Meditech, Cerner
Bidirectional interface capability	no	no	yes (broadcast download & host query)
Results transferred to LIS as soon as test time complete	yes	yes	yes
LOINC codes transmitted with all results How labs get LOINC codes for reagent kits	no n/a	no n/a	no
Electronic interface available (or will be) to automated	no	no	no
(or robotic) specimen handling system			
Modem servicing	no	no	TBD
Time required for maintenance by lab personnel	daily: <5 min; weekly: <5 min; monthly: <5 min	daily: <5 min; weekly: <5 min; monthly: <5 min	daily: 15 min; weekly: 30 min; monthly: 1 h
Onboard maintenance records Training provided with purchase	no 1 day on site	no 1 day on site	yes 3–5 days at vendor offices
Approx. No. of training hrs needed per tech	1 h	1 h	8 h
List price	\$9,600	\$12,500	\$67,600 \$7,000/4
Ann. svc. contract cost (24 h/7 d)/warranty with purchase	prices available on request/1 yr	prices available on request/1 yr	\$7,900/1 yr
Unique advantages	excellent for low-volume testing or as backup to optical system programmable and preprogrammed assays with curve storage, 4 independently timed incubation stations, electronically linked multiple pipettor, 40- character display and internal thermal printer ightweight and compact	 excellent for low- & mid-volume testing or backup 32 incubation positions for samples, 8 measurement channels, 4 independent built-in timers for incubation; results in seconds and in various units (% ratio, INR, g/L, mg/dL, IU/mL), RS-232 interface iightweint and compact 	primary tube sampling with cap piercing integral bar-code reader to ensure positive patient ID truly a walkaway coag analyzer

Part 7 of 11	Helena Laboratories Joe Golias helena@helena.com	Helena Laboratories Joe Golias helena@helena.com	Helena Laboratories Joe Golias helena@helena.com
	1530 Lindbergh Dr., Beaumont, TX 77704	1530 Lindbergh Dr., Beaumont, TX 77704	1530 Lindbergh Dr., Beaumont, TX 77704
See accompanying article, page 18	800-231-5663 www.helena.com	800-231-5663 www.helena.com	800-231-5663 www.helena.com
Instrument name/first year sold	Cascade M/1991	Cascade M-4/1992	Packs-4/1991
No. of units installed in U.S./outside U.S.	>150/—	>100/—	150/180
Country where analyzer designed/manufactured Operational type	U.S./U.S. batch	U.S./U.S. random access	U.S./U.S. random access
Reagent type	open reagent system	open reagent system	open reagent system
Operates on whole blood or spun plasma	spun plasma	spun plasma	spun plasma
Sample handling system Model type	manual benchtop	manual benchtop	manual benchtop
Dimensions (H x W x D)/weight/instrument footprint	8 x 15 x 13 in/25 lbs/1.4 sq ft	8 x 15 x 13 in/25 lbs/1.4 sq ft	10 x 22 x 23 in/70 lbs/3.5 sq ft
FDA-cleared clotting-based tests	PT, APTT, fib., TCT, factor assays II, V, VII–XII	PT, APTT, fib., TCT, factor assays II, V, VII–XII	none
FDA-cleared chromogenic tests	none	none	AT III, F-VIII:C, hep., plasminogen, protein C
FDA-cleared immunologic tests Other FDA-cleared tests	none	none	none
User-defined tests in clinical use	none PT, APTT, fib., TCT, factor assays II, V, VII–XII	none PT, APTT, fib., TCT, factor assays II, V, VII–XII	ristocetin cofactor and platelet aggreg. chrom: AT III, F-VIII:C, hep., plasmin., protein C, ristocetin cofactor, platelet aggregADP, EPI, COI
Tests submitted for 510(k) clearance	none	none	ristocetin, arach. acid none
Tests in development but not yet submitted	dRVVT	dRVVT	none
Methodologies supported	clot detection, optical, turbidimetric	clot detection, optical, turbidimetric	chromogenic, ristocetin cofactor, platelet aggreg.
Oper. must load sep. reag. pack for ea. specimen/test run	no/no 1	no/no 4	no/no 4
No. of different measured assays onboard simultaneously No. of different assays programmed and calibrated at one time	1	4	4
No. of user-definable (open) channels	2	4	12
Of those defined, No. active simultaneously	1	2	4
Factor assays require manual manipulation or dilutions No. of reag. containers onboard at one time/tests per container	yes —/—	yes 0/n/a	yes n/a/n/a
No. of reag. containers onboard at one time/tests per container Reagents refrigerated onboard	—/— n/a	no	n/a/n/a no
Multiple reag. configurations supported	n/a	100	no
Reag., consumables loaded without interrupting testing	no	no	no
Same capabilities when 3rd-party reag. used	yes	yes	n/a
Max. time same lot number of reag. can be used Walkaway capacity: No. of specimens/No. of tests	12 mos no	12 mos no	12 mos no
Min. sample vol. aspirated precisely at one time	manual-50 μL	manual-50 µL	n/a
Standard specimen vol. required to run PT or PTT/Factor VIII activity	100 μL, min. 50 μL/100 μL (dil.), min. 50 μL (dil.)	100 μL, min. 50 μL/100 μL (dil.), min. 50 μL (dil.)	chromogenics: 75 µL, Plt. aggreg.: 225 µL PRP, Ri:
Disposables used/price of each	cuvettes/500@\$54; pipette tips/1,000@\$82	cuvettes/500@\$54; pipette tips/1,000@\$82	cofactor: 50 µL cuvettes/200@\$55.65; pipette tips/1,000@\$82; sti bars/30@\$62.25
Supports direct-from-track sampling	no	no	no
Primary tube sampling supported/pierces caps on primary tubes	no	no	no
Sample bar-code reading capability Reagent bar-code reading capability	no no	no no	no no
Onboard test automatic inventory	no	no	no
Measures No. of tests remaining	no	no	no
Short sample detection	no	no	no
Clot detection as preanalytical variable in plasma sample Auto. detection of adequate reag. for aspir. & anal.	no	no	no
Hemolysis/turbidity detection-quantitation	no/no	no/no	no/no
Dilution of patient samples onboard	no	no	no
Automatic rerun capability/auto reflex testing capability	no/no	no/no	no/no
Lag time during which hypercoagulable samples will not be detected Read time extended for prolonged clotting times	yes (PT: 4 sec, PTT: 14 sec) yes (selectable on menus)	yes (PT: 4 sec, PTT: 14 sec) yes (selectable on menus)	n/a n/a
User can set different-than-standard:	yes (selectable of filefias)	jos (sciostable on menas)	11/4
Reag. volumes/sample volumes	yes/yes	yes/yes	yes/yes
No. and sources of reag.	yes	yes	yes
 Incub. times/reading times Autocalibration or autocalib. alert/multipoint calibration supported 	yes/yes no/yes	yes/yes no/yes	yes/yes no/yes
Auto shutdown/auto startup programmable	no/no	no/no	no/no
Stat time to completion of all analytes and throughput per hour for:	2 min H20 anasimana	2 min/140 anasimana	
PT alone PT, PTT	3 min/120 specimens 7 min/50 specimens	3 min/140 specimens 7 min/80 specimens	Ξ
Fibrinogen	3 min/140 specimens	3 min/160 specimens	_
Factor VIII activity assay	7 min/50 specimens	7 min/80 specimens	20-24 specimens for any test
Time delay from ordering stat to aspir. of sample	n/a	n/a	n/a
Auto. transfer of QC results to LIS Data management capability	no no (incl. QC: L-J)	yes no (incl. QC: L-J)	yes onboard (incl. QC: L-J, Westgard)
Interface supplied by instrument vendor	no (mci. qc. E-3)	no (nici. qc. L-3)	no
Interfaces in active user sites for:	n/a	_	_
Bidirectional interface capability Results transferred to LIS as soon as test time complete	no no	no vec	no voe
LOINC codes transmitted with all results	no	yes no	yes no
How labs get LOINC codes for reagent kits	_	_	_
Electronic interface available (or will be) to automated (or robotic) specimen handling system	_	no	no
Modem servicing	no	NO	TBD
Time required for maintenance by lab personnel	daily: 10 min; weekly: 10 min; monthly: 20 min	daily: 10 min; weekly: 10 min; monthly: 30 min	daily: 15 min; weekly: 15 min; monthly: 1 h
Onboard maintenance records Training provided with purchase	no 1 day on site	no 1 day on site	yes 2 days on site
Approx. No. of training hours needed per tech	2-4 h	2 h	4–8 h
List price	\$6,219	\$8,403	\$16,650
Ann. svc. contract cost (24 h/7 d)/warranty with purchase	\$714/1 yr	\$966/1 yr	\$2,079/1 yr
Unique advantages	QC program onboard curve storage suitable for office lab or as backup analyzer	 4-channel manual analyzer QC program onboard singles or duplicates 	 specialized coag instrument intended for platele aggreg., ristocetin cofactor, & chromogenics

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David C of 11	Instrumentation Laboratory/Beckman Coulter Inc.	Instrumentation Laboratory/Beckman Coulter Inc.	Instrumentation Laboratory/Beckman Coulter Inc.
Part 8 of 11	Katie Blount kiblount@beckman.com	Katie Blount kiblount@beckman.com	Katie Blount kiblount@beckman.com
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Con announcing article mage 19	714-993-8749	714-993-8749	714-993-8749
See accompanying article, page 18	www.beckmancoulter.com	www.beckmancoulter.com	www.beckmancoulter.com
Instrument name/first year sold	Electra 1400C/1995	Electra 1800C/1997	ACL 100/1988
No. of units installed in U.S./outside U.S.	-/-	-/-	4,000+ (all models combined)/8,000+ (all models
Country where analyzer designed/manufactured	U.S./U.S.	U.S./U.S.	combined) Italy/U.S.
Operational type	continuous random access	continuous random access	batch
Reagent type	open reagent system (reconst. manually)	open reagent system (reconst. manually)	open reagent system, guarantee only IL products
Operates on whole blood or spun plasma	spun plasma	spun plasma	spun plasma
Sample handling system	automatic pipetting from tray	auto pipetting, rack	tray
Model type	benchtop	benchtop	benchtop
Dimensions (H x W x D)/weight/instrument footprint	19.7 x 41 x 27.2 in/198 lbs/7.74 sq ft	25 x 48 x 30.4 in/283 lbs/10.13 sq ft	17.7 x 29.5 x 24.8 in/114 lbs/6 sq ft
FDA-cleared clotting-based tests	PT, APTT, fib. (Clauss), TT, factor assays, Pfib (PT	PT, APTT, fib. (Clauss), TT, factor assays, Pfib (PT	PT, APTT, fib. (PT-based), factor assays (extrinsic
	assay-based fib.), protein S	assay-based fib.), protein S	intrinsic), proteins C & S (clottable), TT, lupus
FDA-cleared chromogenic tests	plasminogen, factor VIII, antithrombin, protein C,	plasminogen, factor VIII, antithrombin, protein C,	anticoag., APCR, Clauss fib. none
1 DA-cleared chromogenic tests	heparin	heparin	none
FDA-cleared immunologic tests	none	none	none
Other FDA-cleared tests	none	none	none
User-defined tests in clinical use	none	none	none
Tests submitted for 510(k) clearance	none	none	none
Tests in development but not yet submitted	none	none	none
Methodologies supported	clot detection, optical, tungsten; chromogenic	clot detection, optical, tungsten; chromogenic	clot detection, optical, nephelometric
Oper. must load sep. reag. pack for ea. specimen/test run	no/no	no/no	no/no
No. of different measured assays onboard simultaneously	11	12	3
No. of different assays programmed and calibrated at one time No. of user-definable (open) channels	11 4	12 4	1
Of those defined, No. active simultaneously	4	4	0
Factor assays require manual manipulation or dilutions	4 no	no	yes
No. of reag. containers onboard at one time/tests per container	4/varies	6/varies	3/varies by test
Reagents refrigerated onboard	yes (8°C ±4)	yes (8°C ±4)	yes (15°C)
Multiple reag. configurations supported	yes	yes	yes
Reag., consumables loaded without interrupting testing	yes	yes	no
Same capabilities when 3rd-party reag. used	yes	yes	yes
Max. time same lot number of reag. can be used	12 mos recommended	12 mos recommended	18 mos
Walkaway capacity: No. of specimens/No. of tests	35/4	100/4	18/36
Min. sample vol. aspirated precisely at one time	10 μL	10 μL	10 μL
Standard specimen vol. required to run PT or PTT/factor VIII activity	100 μL, min. 50 μL/100 μL (dil.), min. 50 μL (dil.)	100 μL, min. 50 μL/100 μL (dil.), min. 50 μL (dil.)	50 μL (PT), 53 μL (PTT)/40 μL
Disposables used/price of each	cuvette, dual well, 560 pk/price varies; heat	cuvette, single well, 2,000 pk/price varies; heat	sample cups/price varies; rotors/price varies
	exchanger, 10 pk/price varies	exchanger, 10 pk/price varies	
Supports direct-from-track sampling	no	no	no
Primary tube sampling supported/pierces caps on primary tubes	yes (13x75, 13x100, 10x85, 10x65, 12x91 mm	yes [13x75, 13x100 (closed & open tubes),	no/no
Triniary tube sampling supported/pierces caps on primary tubes	Sarstedt)/no	10x85,10x65, 12x91 Sarstedt (open)]/yes	110/110
Sample bar-code reading capability	yes	yes	no
Reagent bar-code reading capability	no	no	no
Onboard test automatic inventory	yes	yes	no
Measures No. of tests remaining	yes	yes	no
Short sample detection	yes	yes	yes
Clot detection as preanalytical variable in plasma sample	no	no .	no
Auto. detection of adequate reag. for aspir. & anal.	yes	yes	yes
Hemolysis/turbidity detection-quantitation	no/no	no/no	no/no
Dilution of patient samples onboard	yes	yes	yes
Automatic rerun capability/auto reflex testing capability	yes/yes	yes/yes	no/no
Lag time during which hypercoagulable samples will not be detected	yes (PT: 7 sec, PTT: 14 sec)	yes (PT: 7 sec, PTT: 14 sec)	yes (PT & PTT: 5.6 std, 6.7 ext)
Read time extended for prolonged clotting times User can set different-than-standard:	yes (selectable on menus)	yes (selectable on menus)	yes (selectable on menus)
Reag. volumes/sample volumes	yes/yes	yes/yes	no/no
No. and sources of reag.	yes/yes yes	yes/yes yes	no no
Incub. times/reading times	yes/yes	yes yes/yes	no/yes
Autocalibration or autocalib. alert/multipoint calibration supported	yes/yes	yes/yes yes/yes	no/yes
Auto shutdown/auto startup programmable	no/no	no/no	no/no
Francisco			
Stat time to completion of all analytes and throughput per hour for:			
PT alone	approx. 3 min/200 specimens	approx. 3 min/228 specimens	5.5 min/110 specimens
• PT, PTT	approx. 7 min/136 specimens	approx. 7 min/120 specimens	8.5 min/80 specimens
Fibrinogen	approx. 3 min/160 specimens	approx. 7 min/146 specimens	5.5 min/110 specimens
Factor VIII activity assay	approx. 7 min/136 specimens	approx. 7 min/120 specimens	9.5 min/80 specimens
Time delay from ordering stat to aspir. of sample	none	none	15 sec
Auto. transfer of QC results to LIS	yes	yes	no
Data management capability	onboard (incl. QC: L-J, Westgard)	onboard (incl. QC: L-J, Westgard)	no
Interface supplied by instrument vendor	NO Supplied Corner HROC Meditoch Downing	NO Supplied Corner MPOC Meditoch Downing	no most major LIS vandara
Interfaces in active user sites for:	Sunquest, Cerner, HBOC, Meditech, Dawning, Antrim, Soft Computer, others	Sunquest, Cerner, HBOC, Meditech, Dawning, Antrim, Soft Computer, others	most major LIS vendors
	minimi, son computer, oniers	yes (host query)	no
Ridirectional interface capability	ves (host query)		yes
Bidirectional interface capability Results transferred to LIS as soon as test time complete	yes (host query) yes		,
Results transferred to LIS as soon as test time complete	yes	yes no	no
		no in development	no in development
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results	yes no	no	
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits	yes no in development	no in development	in development
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated	yes no in development	no in development	in development
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing	yes no in development no	no in development no	in development no
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel	yes no in development no no daily: 5 min; weekly: 15 min; monthly: 15 min	no In development no no daily: 10 min; weekly: 25 min; monthly: 30 min	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records	yes no in development no daily: 5 min; weekly: 15 min; monthly: 15 min no	no in development no no daily: 10 min; weekly: 25 min; monthly: 30 min no	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes
Results transferred to LIS as soon as test time complete LDINC codes transmitted with all results How labs get LDINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase	yes no in development no no daily: 5 min; weekly: 15 min; monthly: 15 min up to 3 days on site	no in development no no daily: 10 min; weekly: 25 min; monthly: 30 min no up to 3 days on site	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes 2 days on site
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records	yes no in development no daily: 5 min; weekly: 15 min; monthly: 15 min no	no in development no no daily: 10 min; weekly: 25 min; monthly: 30 min no	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech	no no no daily: 5 min; weekly: 15 min; monthly: 15 min no up to 3 days on site up to 24 h	no in development no no delily: 10 min; weekly: 25 min; monthly: 30 min no up to 3 days on site 24 h max.	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes 2 days on site 2 h
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price	yes no in development no no daily: 5 min; weekly: 15 min; monthly: 15 min no up to 3 days on site up to 24 h	no in development no no daily: 10 min; weekly: 25 min; monthly: 30 min no up to 3 days on site 24 h max.	no no daily: 10 min; weekly: 15 min; monthly: 10 min yes 2 days on site 2 h
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase	no no no daily: 5 min; weekly: 15 min; monthly: 15 min no up to 3 days on site up to 24 h	no in development no no delily: 10 min; weekly: 25 min; monthly: 30 min no up to 3 days on site 24 h max.	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes 2 days on site 2 h
Results transferred to LIS as soon as test time complete LIDINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	yes no in development no no daily: 5 min; weekly: 15 min; monthly: 15 min up to 3 days on site up to 24 h \$41,194 variety of options available/1 yr	no in development no no daily: 10 min; weekly: 25 min; monthly: 30 min no up to 3 days on site 24 h max. \$73,645 variety of options available/1 yr	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes 2 days on site 2 h \$16,000 variety of options available/1 yr
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price	yes no in development no no daily: 5 min; weekly: 15 min; monthly: 15 min no up to 3 days on site up to 24 h \$41,194 variety of options available/1 yr	no in development no no daily: 10 min; weekly: 25 min; monthly: 30 min no up to 3 days on site 24 h max. \$73,645 variety of options available/1 yr • cap piercing	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes 2 days on site 2 h \$16,000 variety of options available/1 yr • part of the ACL family, uses same consumables
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	yes no in development no no daily: 5 min; weekly: 15 min; monthly: 15 min up to 3 days on site up to 24 h \$41,194 variety of options available/1 yr	no in development no no daily: 10 min; weekly: 25 min; monthly: 30 min no up to 3 days on site 24 h max. \$73,645 variety of options available/1 yr • cap piercing • standardized test results	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes 2 days on site 2 h \$16,000 variety of options available/1 yr • part of the ACL family, uses same consumables reagents
Results transferred to LIS as soon as test time complete LOINC codes transmitted with all results How labs get LOINC codes for reagent kits Electronic interface available (or will be) to automated (or robotic) specimen handling system Modem servicing Time required for maintenance by lab personnel Onboard maintenance records Training provided with purchase Approx. No. of training hours needed per tech List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	yes no in development no no daily: 5 min; weekly: 15 min; monthly: 15 min no up to 3 days on site up to 24 h \$41,194 variety of options available/1 yr	no in development no no daily: 10 min; weekly: 25 min; monthly: 30 min no up to 3 days on site 24 h max. \$73,645 variety of options available/1 yr • cap piercing	in development no no daily: 10 min; weekly: 15 min; monthly: 10 min yes 2 days on site 2 h \$16,000 variety of options available/1 yr • part of the ACL family, uses same consumables

	 quantitative PT-based fib. positive displacement pipetting for low 	 quantitative PT-based fib. positive displacement pipetting for low 	immunological assays in a small footprint • positive displacement pipetting for low
nique advantages	 part of ACL family, uses same consumables/reagents 	part of ACL family, uses same consumables/reagents	robotic transport arm extensive menu of clotting, chromogenic, &
st price nn. svc. contract cost (24 h/7 d)/warranty with purchase	\$21,500 variety of options available/1 yr	\$45,000 variety of options available/1 yr	\$61,950 various options available/1 yr
nboard maintenance records aining provided with purchase oprox. No. of training hrs needed per tech	yes 2 days on site 6 h	yes 2 days on site 12 h	yes 5 days at vendor offices in Miami varies
odem servicing me required for maintenance by lab personnel	no daily: 10 min; weekly: 15 min; monthly: 10 min	no daily: 10 min; weekly: 15 min; monthly: 10 min	no daily: 0; weekly: 10 min; monthly: 5 min; biweek min
ectronic interface available (or will be) to automated (or robotic) specimen handling system	no	no	no
ow labs get LOINC codes for reagent kits	in development	in development	in development
esults transferred to LIS as soon as test time complete DINC codes transmitted with all results	yes no	yes no	yes no
directional interface capability	no	yes (host query)	yes (broadcast download & host query)
terfaces in active user sites for:	most major LIS vendors	most major LIS vendors	=
ata management capability terface supplied by instrument vendor	no no	onboard (incl. QC: L-J) no	onboard (incl. QC: L-J) no
uto. transfer of QC results to LIS	no	yes	yes
Factor VIII activity assay me delay from ordering stat to aspir. of sample	9.5 min/80 specimens 15 sec	9.5 min/110 specimens 15 sec	varies/110 specimens 15 sec
Fibrinogen Factor VIII activity assay	5.5 min/110 specimens	5.5 min/175 specimens 9.5 min/110 specimens	4 min/175 specimens
PT, PTT	8.5 min/80 specimens	8.5 min/110 specimens	8 min/110 specimens
at time to completion of all analytes and throughput per hour for: PT alone	5.5 min/110 specimens	5.5 min/175 specimens	4 min/175 specimens
utocalibration or autocalib. alert/multipoint calibration supported uto shutdown/auto startup programmable	no/yes no/no	no/yes no/no	no/yes no/no
Incub. times/reading times	no/yes	no/yes	yes/yes
No. and sources of reag.	no/no no	no/no no	yes/yes yes
ser can set different-than-standard: Reag. volumes/sample volumes	no/no	no/no	vae/vae
ead time extended for prolonged clotting times	yes (selectable on menus)	yes (selectable on menus)	yes (selectable on menus)
utomatic rerun capability/auto reflex testing capability ng time during which hypercoagulable samples will not be detected	no/no yes (PT & PTT: 5.6 std, 6.7 ext)	no/no yes (PT & PTT: 5.6 std, 6.7 ext)	yes/yes yes (PT & PTT: 3 sec)
lution of patient samples onboard	yes no/no	yes no/no	yes yes/yes
emolysis/turbidity detection-quantitation	no/no	no/no	no/no
ot detection as preanalytical variable in plasma sample uto. detection of adequate reag. for aspir. & anal.	no yes	no yes	no yes
nort sample detection	yes	yes	yes
easures No. of tests remaining	no	no	yes
eagent bar-code reading capability nboard test automatic inventory	no no	no no	no yes
ample bar-code reading capability	yes (optional)	yes	yes
imary tube sampling supported/pierces caps on primary tubes	yes (13 x 75 mm)/no	yes (13 x 75 mm)/no	yes (13 x 64, 75, 100 mm; 11.5 x 64, 92 mm)/no
upports direct-from-track sampling	no	no	no
sposables used/price of each	rotors/price varies	rotors/price varies	rotors/price varies
in. sample vol. aspirated precisely at one time andard specimen vol. required to run PT or PTT/factor VIII activity	10 μL 50 μL (PT), 53 μL (PTT)/40 μL	10 μL 50 μL (PT), 53 μL (PTT)/40 μL	5 μL 50 μL/40 μL
alkaway capacity: No. of specimens/No. of tests in. sample vol. aspirated precisely at one time	18/36 10 µL	18/36 10 μL	40/260 5 μL
ax. time same lot number of reag. can be used	18 mos	18 mos	18 mos
eag., consumables loaded without interrupting testing ame capabilities when 3rd-party reag. used	no yes	no yes	no yes
ultiple reag. configurations supported eag., consumables loaded without interrupting testing	yes	yes	yes
eagents refrigerated onboard	yes (15°C)	yes (15°C)	yes (15°C)
o. of reag. containers onboard at one time/tests per container	yes 3/varies by test	no 3/varies by test	18/varies by test
f those defined, No. active simultaneously actor assays require manual manipulation or dils	0 ves	1 10	varies with test-reagent combination no
o. of user-definable (open) channels	0	10 (requires optional research package)	total test capacity: 300 (IL test channels 120+ op
o. of different measured assays onboard simultaneously o. of different assays programmed and calibrated at one time	3 1	1	18 1
per. must load sep. reag. pack for ea. specimen/test run o. of different measured assays onboard simultaneously	no/no 3	no/no 4	no/no 18
		clot detection, optical, nephelometric; chromogenic; immunologic (optical, latex enhanced immunoassay)	immunologic
ethodologies supported	clot detection, optical, nephelometric		clot detection, optical, nephelometric; chromoge
ests submitted for 510(k) clearance ests in development but not yet submitted	none none	none none	HS-CRP vWF activity
ser-defined tests in clinical use	none	none	none
ther FDA-cleared tests	none	none	enhanced immunoassay), free protein S none
DA-cleared immunologic tests	none	protein C D-dimer (latex enhanced immunoassay), vWF	plasmin inhibitor, liquid antithrombin, factor VIII D-dimer (latex enhanced immunoassay), vWF (la
DA-cleared chromogenic tests	anticoag., APCR-V, Clauss fib. none	anticoag., APCR-V, Clauss fib. antithrombin, hep. Xa, plasminogen, antiplasmin,	antithrombin, heparin, protein C, plasminogen,
DA-cleared clotting-based tests	PT, APTT, fib. (PT-based), factor assays (extrinsic & intrinsic), proteins C & S (clottable), TT, lupus	PT, APTT, fib. (PT-based), factor assays (extrinsic & intrinsic), proteins C & S (clottable), TT, lupus	PT, APTT, PT-based fib., Clauss fib., TT, factor ass protein C, protein S, LAC screen, LAC confirm, APC
mensions (H x W x D)/weight/instrument footprint	17.7 x 29.5 x 24.8 in/114 lbs/6 sq ft	17.7 x 29.5 x 24.8 in/114 lbs/6 sq ft	23.6 x 36.2 x 23.6 in/138.6 lbs/6 sq ft
odel type	benchtop	benchtop	benchtop
perates on whole blood or spun plasma ample handling system	spun plasma tray	spun plasma tray	spun plasma tray
eagent type	open reagent system, guarantee only IL products	open reagent system, guarantee only IL products	open reagent system
ountry where analyzer designed/manufactured perational type	Italy/U.S. batch	Italy/U.S. random programming	Italy/U.S. random access
o. of units installed in U.S./outside U.S.	4,000+ (all models combined)/8,000+ (all models combined)	4,000+ (all models combined)/8,000+ (all models combined)	300+/600+
strument name/first year sold	ACL 1000/1991	ACL 7000/1997	ACL 9000/2000
	www.beckmancoulter.com	www.beckmancoulter.com	www.beckmancoulter.com
ee accompanying article, page 18	200 S. Kraemer Blvd., Brea, CA 92621 714-993-8749	200 S. Kraemer Blvd., Brea, CA 92621 714-993-8749	200 S. Kraemer Blvd., Brea, CA 92621 714-993-8749
	Katie Blount kjblount@beckman.com	Katie Blount kjblount@beckman.com	Instrumentation Laboratory/Beckman Coulter In Katie Blount kjblount@beckman.com

Part 10 of 11 Instrumentation Laboratory/Beckman Coulter Inc. Katle Blount kjlboun(Beckman.com 200 S. Kramer Blvd, Brea, CA 92621 714-993-8749 www.beckmancoulter.com Instrument name/first year sold ACL Advance/2000 No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured U.S./U.S. U.S./U.S. Departates on whole blood or spun plasma Sample handling system Model type Ushensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests PT, APTT, PT-based fib, Clauss fib, TT, factor assays, protein C, LAC screen, LAC confirm, APCR-V antithrombin, heparin, protein C, plasminogen, plasmin inhibitor, figuid antithrombin, heparin, protein C, plasminogen, plasmin inhibitor, figuid antithrombin, heparin, protein C, plasminogen, plasmin inhibitor, figuid antithrombin, heparin, protein C, plasminogen,	Trinity Biotech V. Eggerding hemostasisinfo@trinityusa.com 1930 Innerhett Business Center Dr., St. Louis, M0 63114 800-325-3424 www.trinitybiotech.com KC1∆/2001 <500/<500 Germany/Germany semiautomatic, single channel open reagent system spun plasma manual benchtop 3.25 x 5.5 x 8.25 in/2.5 lbs/<1 sq ft	Trinity Biotech V. Eggerding hemostasisinfo@trinityusa.com 1930 Innerhett Business Center Dr., St. Louis, MO 631 800-325-3424 www.trinitybiotech.com KC4\\/2001 <500/<500 Germany/Germany semiautomatic, 4 channels
Kate Blount kilbount@beckman.com 200 S. Kramers Blvd., Brea, CA 92621 714-993-8749 www.beckmancoulter.com No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured U.S./U.S. Operational type poperational type Operates on whole blood or spun plasma Sample handling system Model type Dimensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests PT, APTT, PT-based fib., Clauss fib., TT, factor assays, protein C, LAC screen, LAC confirm, APCR-V antithrombin, heparin, protein C, plasminogen,	1930 Înnerhelt Business Center Dr., St. Louis, M0 63114 800-325-3424 www.brintyloidech.com KC1∆/2001 <500/<500 Germany/Germany semiautomatic, single channel open reagent system spun plasma manual benchtop	1930 Inverbelt Business Center Dr., St. Louis, MO 631 800-325-3424 www.trinityloitect.com KC4A/2001 <500/-500 Germany/Germany
T14-983-8749 www.beckmancoulter.com	800-325-3424 www.trinityblotech.com KC1.\(\alpha\)2001 <500/-500 Germany/Germany semiautomatic, single channel open reagent system spun plasma manual benchtop	800-325-3424 www.trinitybiotech.com KC4\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Instrument name/first year sold No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured Operational type Operates on whole blood or spun plasma Sample handling system Model type Dimensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests PT, APT, PT-based fib., Clauss fib., TT, factor assays, protein C, LAC screen, LAC confirm, APCR-V antithromby, plasmin, protein C, LAC screen, LAC confirm, APCR-V antithromby, plasmin, protein C, Lac screen, LAC confirm, APCR-V antithromby, plasmin, protein C, LAC screen, LAC confirm, APCR-V antithromby, plasmin, protein C, LAC screen, LAC confirm, APCR-V antithromby, heparin, protein C, Lpssminogen,	www.trinitybiotech.com KC1\triangle2001 -500/-500 Germany/Germany semiautomatic, single channel open reagent system spun plasma manual benchtop	www.trinitybiotech.com KC4:\(\alpha\)/2001 <500/<500 Germany/Germany
Instrument name/first year sold ACL Advance/2000 No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured U.S./U.S. Operational type Reagent type Operates on whole blood or spun plasma Sample handling system Model type Dimensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests PT, APTT, PT-based fib., Clauss fib., TT, factor assays, protein C, LAG screen, LAC confirm, APCR-V antitrymorphic paparin, protein, Epparin,	KC1∆/2001 <500/<500 Germany/Germany semiautomatic, single channel open reagent system spun plasma manual benchtop	KC4∆/2001 <500/<500 Germany/Germany
No. of units installed in U.S./outside U.S. Country where analyzer designed/manufactured Operational type Operates on whole blood or spun plasma Sample handling system Dimensions (H x W x D)/weight/instrument footprint FDA-cleared clotting-based tests PT, APTT, PT-based fib., Clauss fib., TT, factor assays, protein C, LAS screen, LAC confirm, APCR-V antitrombin, Paparin, protein, Epparin, option, Epparin, Indications and Epparin option, Epparin, Indication, Epparin, Indicat	<500/<500 Germany/Germany semiautomatic, single channel open reagent system spun plasma manual benchtop	<500/<500 Germany/Germany
Country where analyzer designed/manufactured U.S./U.S. Operational type open raegent system, guarantee only IL products open reagent system, guarantee only IL products open	Germany/Germany semiautomatic, single channel open reagent system spun plasma manual benchtop	Germany/Germany
Country where analyzer designed/manufactured U.S./U.S. Operational type open raegent system, guarantee only IL products open reagent system, guarantee only IL products open	Germany/Germany semiautomatic, single channel open reagent system spun plasma manual benchtop	Germany/Germany
Operational type Reagent type Operates on whole blood or spun plasma Sample handling system Dimensions (H x W x D)/weight/instrument footprint Spun benefits Operated to thing-based tests Operated to the spun plasma racks, up to 12 benefits Dimensions (H x W x D)/weight/instrument footprint Spun plasma racks, up to 12 benefits Spun plasma racks, up to 12 benefits Dimensions (H x W x D)/weight/instrument footprint Spun plasma racks, up to 12 benefits Spun plasma ratks, plasma	semiautomatic, single channel open reagent system spun plasma manual benchtop	
Operates on whole blood or spun plasma Sample handling system Rodel type Dimensions (H x W x D)/weight/instrument footprint RODE TOO SAMPLE AND	spun plasma manual benchtop	
Sample handling system Model type Dimensions (H x W x D)/weight/instrument footprint 32.2 x 41 x 24.8 in/185 lbs/15 sq ft FDA-cleared clotting-based tests PT, APTT, PT-based fib., Clauss fib., TT, factor assays, protein C, LAC screen, LAC confirm, APCR-V antithrombin, heparin, protein C, plasminogen,	manual benchtop	open reagent system
Model type benchtop Dimensions (H x W x D)/weight/instrument footprint 32.2 x 41 x 24.8 in/185 lbs/15 sq ft FDA-cleared clotting-based tests PT, APTT, PT-based fib., Clauss fib., TT, factor assays, protein C, LAC screen, LAC confirm, APCR-V antithrombin, heparin, protein C, plasminogen,	benchtop	spun plasma
Dimensions (H x W x D)/weight/instrument footprint 32.2 x 41 x 24.8 in/185 lbs/15 sq ft FDA-cleared clotting-based tests PT, APTT, PT-based fib., Clauss fib., TT, factor assays, protein C, LAC screen, LAC confirm, APCR-V antithrombin, heparin, protein C, plasminogen,		manual
FDA-cleared clotting-based tests PT, APTT, PT-based fib., Clauss fib., TT, factor assays, protein C, LAC screen, LAC confirm, APCR-V antithrombin, heparin, protein C, plasminogen,		benchtop 4.7 x 13.9 x 17.7 in/14 lbs/1.7 sq ft
assays, protein C, LAC screen, LAC confirm, APCR-V FDA-cleared chromogenic tests antithrombin, heparin, protein C, plasminogen,	0.20 X 0.0 X 0.20 Hb 2.0 Hb 5/ 1 54 H	4.7 × 10.5 × 17.7 III/ 14 III/ 1.7 Oq 10
FDA-cleared chromogenic tests antithrombin, heparin, protein C, plasminogen,	PT, APTT, fib., TT, instrinsic & extrinsic factors	PT, APTT, fib., TT, atroxin, intrinsic & extrinsic facto
	,	
piasiiiii iiiiibitoi, iiquiu aiititiii oiibiii	n/a	n/a
FDA-cleared immunologic tests D-dimer (latex enhanced immunoassay), vWF, free	n/a	n/a
protein S		
Other FDA-cleared tests none	n/a	n/a
User-defined tests in clinical use none	n/a	n/a
Tests submitted for 510(k) clearance HS-CRP, protein S	n/a	n/a
Tests in development but not yet submitted wWF activity	n/a	n/a
Wethodologies supported clot detection, optical; chromogenic; immunologic	clot detection, mechanical	clot detection, mechanical
(optical, latex enhanced immunoassay)	,	
Oper. must load sep. reag. pack for ea. specimen/test run no/no	no/no	no/no
No. of different measured assays onboard simultaneously varies with test-reagent combination, limited only	1	5
by No. of reag. positions No. of different assays programmed and calibrated at one time 1	manual	1/1
vo. of different assays programmed and calibrated at one time 1 No. of user-definable (open) channels total test capacity: 100 (IL test channels + open)	manual n/a	1/1 n/a
Of those defined, No. active simultaneously varies with test-reag. combination	n/a	up to 4
Factor assays require manual manipulation or dils	yes	yes
No. of reag. containers onboard at one time/tests per container 42/varies by test, container size	1/varies for each assay	5/varies for test kit
Reagents refrigerated onboard yes (15°C)	no	no
Multiple reag. configurations supported yes	no	no .
Reag., consumables loaded without interrupting testing yes	n/a, manual	n/a, manual
Same capabilities when 3rd-party reag. used yes Max. time same lot number of reag. can be used 18 mos	yes 12–18 mos	yes 12–18 mos
Walkaway capacity: No. of specimens/No. of tests 120/variable	n/a, manual	n/a, manual
Min. sample vol. aspirated precisely at one time 10 µL	n/a	n/a
Standard specimen vol. required to run PT or PTT/factor VIII activity 50 µL/10 µL	50 μL/50 μL	50 μL/50 μL
Disposables used/price of each cuvettes/price varies	cuvettes & ball dispenser/inquire	cuvettes & ball dispenser/inquire
Supports direct-from-track sampling no	n/a	n/a
Supports direct-from-track sampling Primary tube sampling supported/pierces caps on primary tubes yes/no	n/a	n/a
Sample bar-code reading capability yes	n/a	n/a
Reagent bar-code reading capability no	n/a	n/a
Onboard test automatic inventory no	n/a	n/a
Measures No. of tests remaining no	n/a	n/a
Short sample detection yes	n/a	n/a
Clot detection as preanalytical variable in plasma sample no	n/a	n/a
Auto. detection of adequate reag. for aspir. & anal. yes	n/a	n/a
Hemolysis/turbidity detection-quantitation yes/yes Dilution of patient samples onboard yes	n/a n/a	n/a n/a
Automatic rerun capability/auto reflex testing capability yes/no	n/a	n/a
Lag time during which hypercoagulable samples will not be detected yes (PT: 7 sec., PTT: 10 sec)	yes (PT & PTT: 4.5 sec)	yes (PT & PTT: 4.5 sec)
Read time extended for prolonged clotting times yes (selectable on menus)	yes	yes
User can set different-than-standard:	•	•
• Reag. volumes/sample volumes yes/yes	yes/yes	yes/yes
• No. and sources of reag.	yes	yes
• Incub. times/reading times yes/yes	yes/yes	yes/yes
Autocalibration or autocalib. alert/multipoint calibration supported no/yes Auto shutdown/auto startup programmable no/no	no/yes no/no	no/yes no/no
Natio Stratage Transaction State tup programmable III/III	III/IIIV	110/110
Stat time to completion of all analytes and throughput per hour for:		
PT alone 2.5 min/240 specimens	75 sec/48	75 sec/48
PT, PTT 8 min/180 specimens	350 sec/10	350 sec/10
Fibrinogen 2.5 min/240 specimens	65 sec/55	65 sec/55
Factor VIII activity assay 2.5 min/180 specimens	275 sec/13	275 sec/13
Fime delay from ordering stat to aspir. of sample 20 sec Auto. transfer of QC results to LIS yes	n/a ves	n/a yes
Auto, transfer of QC results to LIS yes Data management capability onboard (incl. QC: L-J)	yes yes	yes yes
nterface supplied by instrument vendor no	10	10
nterfaces in active user sites for: most major LIS vendors	_	_
Bidirectional interface capability yes (broadcast download)	n/a	n/a
Results transferred to LIS as soon as test time complete yes	yes	yes
LOINC codes transmitted with all results no	Ξ	Ξ
How labs get LOINC codes for reagent kits in development Electronic interface available (or will be) to automated no	n/a	— n/a
(or robotic) specimen handling system		
, , , , , , , , , , , , , , , , , , , ,		
Modem servicing no	n/a	n/a
Fime required for maintenance by lab personnel daily: 15 min; weekly: 15 min; monthly: 10 min	none	none
Onboard maintenance records yes Fraining provided with purphase 5 days at yandar offices in Mismi	n/a	n/a
Training provided with purchase 5 days at vendor offices in Miami Approx. No. of training hrs needed per tech 24 h	as needed on site 2 h	as needed on site 2 h
······································		
List price \$79,500 Ann. svc. contract cost (24 h/7 d)/warranty with purchase various options available/1 yr	\$2,100 \$350 (M–F, 8–5)/1 yr	\$9,200 \$900 (M–F, 8–5)/1 yr
Unique advantages • extensive menu of clotting, chromogenic, &	half volume PT & APTT testing for significant	single microcuvettes for all tests; uses half vol
omque auvantages • extensive menu of ciotung, chromogenic, & immunologic assays	reagent savings	for PT & APTT, reduced volume for all other tests
• high throughput	patented ball technology for extremely	• incub. area at 37°C; 12 samples, 5 reag., 2 pipe
positive displacement pipetting for low	reproducible & reliable results	 4 simultaneously usable test positions using
maintenance & high precision	optional printer to ensure quality of test results	patented ball method for extremely reproducible
		reliable results • optional printer to ensure quality of test result

Part 11 of 11	Trinity Biotech	Trinity Biotech V. Eggerding hemostasisinfo@trinityusa.com	Trinity Biotech
	V. Eggerding hemostasisinfo@trinityusa.com 1930 Innerbelt Business Center Dr., St. Louis, MO 63114	1930 Innerbelt Business Center Dr., St. Louis, MO 63114	V. Eggerding hemostasisinfo@trinityusa.com 1930 Innerbelt Business Center Dr., St. Louis, MO 63114
Con accompanying article many 10	800-325-3424	800-325-3424	800-325-3424
See accompanying article, page 18	www.trinitybiotech.com	www.trinitybiotech.com	www.trinitybiotech.com
Instrument name/first year sold	Amax 200/2001	Amax 400/1997	Amax Destiny/2003
No. of units installed in U.S./outside U.S.	<500/<500	<500/<500	n/a/n/a
Country where analyzer designed/manufactured	Germany/Germany	Germany/Germany	Germany & U.S./Germany
Operational type	random access	random access	random access
Reagent type	open reagent system	open reagent system	open reagent system
Operates on whole blood or spun plasma	spun plasma	spun plasma	spun plasma
Sample handling system Model type	60-position continuous addition sample rack benchtop or floor-standing	continuous feed sample chain floor-standing	rack benchtop
Dimensions (H x W x D)/weight/instrument footprint	BT: 25 x 32.75 x 28.75 in/286 lbs/6.5 sq ft	52 x 56 x 27 in/803 lbs/10.5 sq ft	22 x 33 x 27 in/165 lbs/150 sq ft
, , , , , , , , , , , , , , , , , , , ,	FS: 53.25 x 32.75 x 28.75 in/451 lbs/6.5 sq ft	·	·
FDA-cleared clotting-based tests	APTT, atroxin, fib., PT, protein C, TT, protein S, intrinsic & extrinsic factors, dRVVT	PT, APTT, fib., TT, intrinsic & extrinsic factors, protein C & S, dRVVT	PT, APTT, fib., TT, atroxin, factors II, V, VII, VIII, IX, X, XI, & XII
	mumble & exumble factors, univer	0 & 3, univer	AI, & AII
FDA-cleared chromogenic tests	antithrombin, plasminogen, hep-Xa, protein C	hep-Xa, antithrombin, plasminogen, protein C	AT
FDA-cleared immunologic tests	D-dimer	D-dimer	D-dimer D-dimer
Other FDA-cleared tests	none	none	_
User-defined tests in clinical use	PT & APTT mixing studies, Ptt. neutralization, Kaolin clotting time, activated protein C resistance, protein S	PT & APTT mixing studies, Plt. neutralization, Kaolin clotting time, protein S (immunol.), vWF assay	_
	(immunol.), vWF assay (immunol.), thrombotest, hep.	(immunol.), thrombo test, hep. cofactor II, alpha-2	
	cofactor II, alpha-2 antiplasmin	antiplasmin	
Tests submitted for 510(k) clearance	none	activated protein C resistance	-
Tests in development but not yet submitted	activated protein C resistance	none	-
Methodologies supported	clot detect., mechanical; clot detect., optical, tungsten,	clot detect., mechanical; clot detect., optical, tungsten,	clot detect., mechanical; clot detect., optical,
•	turbidimetric; chromogenic; immunologic (microparticles)	turbidimetric; chromogenic; immunologic (microparticles)	turbidimetric; chromogenic; immunologic
Oper. must load sep. reag. pack for ea. specimen/test run	no/no	no/no	no/no
No. of different measured assays onboard simultaneously	32	40	10
No. of different assays programmed and calibrated at one time	32 32	40 40	unlimited unlimited
No. of user-definable (open) channels Of those defined, No. active simultaneously	32 12	40	unimited 10
Factor assays require manual manipulation or dilutions	no	no	no
No. of reag. containers onboard at one time/tests per container	24/varies with kit & operational mode	24/varies with assay & operational mode	30/varies
Reagents refrigerated onboard	yes (15°C)	yes (15°C)	yes (12–16°C)
Multiple reag. configurations supported	yes yes	yes yes	yes
Reag., consumables loaded without interrupting testing Same capabilities when 3rd-party reag. used	ves	yes	yes yes
Max. time same lot number of reag. can be used	12–18 mos	12–18 mos	varies by reagent
Walkaway capacity: No. of specimens/No. of tests	60/450	1,250/450	50/10
Min. sample vol. aspirated precisely at one time	5 μL	3 μL	5 μL
Standard specimen vol. required to run PT or PTT/factor VIII activity	50 µL/50 µL	50 μL/50 μL	50 μL/5 μL
Disposables used/price of each	cuvettes/—, probe decontaminate/—	cuvettes/—, probe decontaminate/—, tubing/—	reaction trays, EnzyClean+/—
Supports direct-from-track sampling	no	no	no
Primary tube sampling supported/pierces caps on primary tubes	yes/no	yes/no	yes (standard, pediatric, micro)/no
Sample bar-code reading capability	yes	yes	yes
Reagent bar-code reading capability	no	no	no
Onboard test automatic inventory Measures No. of tests remaining	yes yes	yes yes	yes yes
Short sample detection	yes	yes	yes
Clot detection as preanalytical variable in plasma sample	n/a	n/a	no
Auto. detection of adequate reag. for aspir. & anal.	yes	yes	yes
Hemolysis/turbidity detection-quantitation Dilution of patient samples onboard	not necessary	not necessary	n/a/n/a
Automatic rerun capability/auto reflex testing capability	yes yes/no	yes yes/yes	yes yes/no
Lag time during which hypercoagulable samples will not be detected	yes (4.5 sec)	yes (4.5 sec)	no
Read time extended for prolonged clotting times	yes (selectable on menus)	yes (selectable on menus)	yes
User can set different-than-standard:			
Reag. volumes/sample volumes No. and sources of reag.	yes/yes yes	yes/yes yes	yes/yes yes
No. and sources of reag. Incub. times/reading times	yes yes/yes	yes/yes	yes/yes
Autocalibration or autocalib. alert/multipoint calibration supported	no/yes	no/yes	no/yes
Auto shutdown/auto startup programmable	yes/yes	yes/yes	yes/yes
Stat time to completion of all analytes and throughput per hour for:			
PT alone	90 sec/190 tests	90 sec/325 tests	<3 min/90 tests
• PT, PTT	300 sec/120 tests	300 sec/480 tests	-/-
• Fibrinogen	70 sec/115 tests	70 sec/212 tests	-/ -
Factor VIII activity assay Time delay from ordering stat to aspir. of sample	300 sec/120 tests varies by test	300 sec/200 tests varies by test	_/_
Auto. transfer of QC results to LIS	varies by test ves	yes	yes
Data management capability	onboard (incl. QC: L-J, Westgard)	onboard (incl. QC: L-J, Westgard)	onboard (incl. QC: L-J, Westgard)
Interface supplied by instrument vendor	yes (included in instrument price)	yes (included in instrument price)	no
Interfaces in active user sites for:	all major LIS companies	in development	
Bidirectional interface capability Results transferred to LIS as soon as test time complete	yes (broadcast download & host query)	yes (broadcast download & host query)	yes (broadcast download & host query)
LOINC codes transmitted with all results	yes —	yes —	yes yes
How labs get LOINC codes for reagent kits	_	-	_
Electronic interface available (or will be) to automated	no	yes	no
(or robotic) specimen handling system			
Modem servicing	yes	yes	no
Time required for maintenance by lab personnel	daily: <2 min; weekly: <35 min; monthly: <1 h	daily: <10 min; weekly: <30 min; monthly: <1 h	per shift: <5 min; daily: <30 min; weekly: <30 min
Onboard maintenance records	no	yes	yes
Training provided with purchase	5 days on site, 4 days at vendor office 16–24 h	5 days on site, 5 days at vendor office 48–72 h	2 days on site
Approx. No. of training hours needed per tech	10-24 1/	70-14 1	8 h
List price Ann. svc. contract cost (24 h/7 d)/warranty with purchase	\$81,000 \$8,000/1 yr	\$132,000 \$14,000/1 yr	\$49,000 \$6,000/1 yr
Unique advantages	optical & mechanical testing for greatest reliability; can perform simultaneous chrom. & clotting tests quarter volume PT & APTT (half volume other tests) easy-to-use software monitors quality at all times	selective multichannel hemostasis testing offering true random access patented ball method technology parallel clotting & chromogenic testing	true clot detection IntuiTouch software expanded test menu (D-dimer)