Precise, reliable—the trusted standard.
THE TRUSTED STANDARD, FROM A COMPANY YOU TRUST

Medtronic, the world’s leading medical technology company and a key participant in blood management for more than a decade, introduces a new generation Automated Coagulation Timer. The ACT Plus™ System is a microprocessor-controlled electromechanical coagulation instrument designed to determine coagulation endpoints in whole blood, citrated whole blood, and plasma samples. Clotting-time results are presented on the instrument’s Clot Time Display (CTD) and Liquid Crystal Display (LCD) screens.

The ACT Plus™ System provides long-term data storage and retrieval, with access to previous patient and quality control test data. Test results are stored in the order in which they are performed. The ability to externally transfer or save data to a floppy disk enhances the system’s versatility.

Manufactured by the Medtronic® Biologic Therapeutics and Diagnostics business, the ACT Plus™ System combines a trusted standard in precise clot detection technology with state-of-the-art user enhancements including data management and connectivity-ready capabilities.

ACT Plus™ AUTOMATED COAGULATION TIMER

The ACT Plus™ System is portable and well suited for all point-of-care testing situations. It offers the reliability required in:

- Cardiovascular and vascular surgery
- Cardiac catheterization laboratories
- Critical care units
- Hemodialysis units

BUILT-IN EFFICIENCY

- Immediate results mean anticoagulant dosages can be adjusted quickly.
- Dual-well testing provides the extra confidence that only duplicate results provide.
- Because less than 1 ml of blood is required for each test, the ACT Plus™ System is especially suited for patients with small blood volumes.
- Bar Code Scanner (optional) is used for accurate entry of cartridge and control lot numbers and expiration dates.

SCIENTIFIC ACCURACY

- Full range of lyophilized controls and an electronic control are available to verify instrument, cartridge and operator performance and meet regulatory guidelines for testing.
- Lyophilized controls are easy to reconstitute and provide enough volume to test multiple instruments.
- Electronic control provides multiple-level testing in one device.

NEW, MODULAR DESIGN

- Quiet operation
- Easy to clean
- User-friendly switches
- Convenient, comfortable carrying handle
**MULTIPLE TESTING CAPABILITY**

ACT cartridges are available in a variety of sensitivities to monitor heparin at the appropriate level. High Range Activated Clotting Time (HR-ACT), Low Range Activated Clotting Time (LR-ACT), Heparinase Test Cartridge (HTC), and Recalcified Activate Clotting Time (RACT) tests can be run quickly, reliably and easily on the ACT Plus™. HR-ACT cartridges with heparinase allow you to establish your patient’s baseline value in the presence of heparin, to verify heparin reversal and to determine the presence of pre- and post-surgical heparin.

**PRE-CISE, RELIABLE...THE TRUSTED STANDARD**

**PRE-CISE IN NORMAL AND ABNORMAL RANGES**

<table>
<thead>
<tr>
<th>Cartridge Lot</th>
<th>N</th>
<th>Baseline ACT (sec) (0 u/ml Heparin)</th>
<th>Heparinized ACT (sec) (4 u/ml Heparin)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Within Lot</td>
<td>Between Lot</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>130</td>
<td>130</td>
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<tr>
<td>SD</td>
<td></td>
<td>3.3</td>
<td>6.6</td>
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<tr>
<td>%CV</td>
<td></td>
<td>2.6%</td>
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<tr>
<td>N</td>
<td></td>
<td>63</td>
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**INTRA-INSTRUMENT COMPARISON**

<table>
<thead>
<tr>
<th>Cartridge Lot</th>
<th>N</th>
<th>Sum</th>
<th>Average</th>
<th>Variance</th>
<th>SD</th>
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<tr>
<td>212000085</td>
<td>23</td>
<td>4334</td>
<td>188.43</td>
<td>5864</td>
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<tr>
<td>212000091</td>
<td>23</td>
<td>4365</td>
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<td>212000088</td>
<td>23</td>
<td>4498</td>
<td>195.57</td>
<td>5293</td>
<td>72.75</td>
</tr>
</tbody>
</table>

**CARTRIDGES**

- **High Range Activated Clotting Time (HR-ACT):** for use with fresh whole blood samples in cardiovascular surgery, vascular surgery, and percutaneous transluminal coronary angioplasty (PTCA)
- **Low Range Activated Clotting Time (LR-ACT):** for use with fresh whole blood samples in dialysis, ECMO, and therapeutic heparin monitoring
- **Heparinase Test Cartridge (HTC):** for use with fresh whole blood samples to identify the presence of heparin in various clinical settings
- **Recalcified Activate Clotting Time (RACT):** for use with citrated whole blood samples in dialysis, and therapeutic heparin monitoring
- **General Purpose Cartridge (GPC):** for use with citrated whole blood or plasma samples for performing PT or APTT tests

**CONTROLS**

- CLOTtrac® HR-ACT Control (normal)
- CLOTtrac® HR Abnormal Control
- CLOTtrac® CWB Control (normal)
- CLOTtrac® LR Abnormal Control
- Note: CaCl₂ required
- CLOTtrac® HTC Control
- CLOTtrac® RACT Abnormal Control
INSTRUMENT SERVICE
Field-based service representatives provide on-site instrument service for routine maintenance and ongoing support. Annual service contracts are available. To contact your Field Service Representative, call 800-433-4311.

TECHNICAL SUPPORT
For technical and regulatory support, our in-house staff can answer your questions on instrument performance, test use, cartridge selection, interpretation of results, and information on CLIA, CAP and JCAHO guidelines.

A number of system features and complimentary documentation help you optimize instrument operation. Additional QC and Data Management products and services include:

• Full line of liquid controls
• Electronic Control Device (optional—see How to Order)
• POC set-up guide—available from your sales representative
• Training in-services and materials
• External Data Management application

For technical support, or more information, call: 800-328-3320.

CUSTOMER SERVICE
For ordering information on instruments, test cartridges and controls, please see back page of this brochure. To place an order with Medtronic Customer Service, call: 800-854-3570.
TEST RESULTS AND QUALITY CONTROL DATA STORAGE

- Store up to 500 patient and QC records
- Download data to a diskette for transfer to a PC
- Download through RS 232 port to LIS system
- Optional Bar Code Scanner for quick and accurate entry of cartridge and control lot numbers and expiration dates.
- Supports the latest requirements for POC testing equipment

QC MANAGEMENT

- Instrument serial number
- Patient and user identification
- QC lockout and user lockout
- Cartridge type, lot number and expiration date
- Test date and time

ENHANCED DATA DISPLAYS

- Large LED readouts to view test results from a distance
- LCD screen and keyboard for managing key parameters
- Easy navigation between screens

PC-BASED DATA MANAGEMENT

- Data management software loads onto PC
- Software loads data into four spreadsheets
- Cumulates data over time
- Generates Levy-Jennings plot
- Provides powerful PC-based software to summarize data-without an LIS interface
- Upgradeable software
SYSTEM SPECIFICATIONS

PHYSICAL DIMENSIONS:
- Depth: 13.6 in (34.5 cm)
- Width: 9.0 in (22.9 cm)
- Height: 11.9 in (30.2 cm)
- Weight: 11.5 lb (5.22 kg)

ENVIRONMENTAL:
- Operating temperature: 14 ºC to 32 ºC (57 ºF to 90 ºF)
- Storage temperature: 0 ºC to 49 ºC (32 ºF to 120 ºF)
- Operating humidity: 10% to 90%, noncondensing
- Storage humidity: 5% to 90%, noncondensing

Data Ports:
- Serial Data Port: 19200 baud, 8 data bits, 1 stop bit, no parity
- Bar Code Scanner Port: used with the optional ACT Plus™ Bar Code Scanner
- Floppy Drive: PC compatible, 1-44 MB, 3.5-inch floppy disk

Power:
- Voltage: 100 - 240 V~ Single Phase
- Frequency: 50 - 60 Hz
- Maximum current: 1.2/0.6 A (100 - 120/200 - 240)

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Product</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Plus™ Instrument</td>
<td>ACT100</td>
</tr>
<tr>
<td>ACT Plus™ Bar Code Scanner</td>
<td>ACTSC</td>
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HOW TO ORDER CARTRIDGES AND CONTROLS

<table>
<thead>
<tr>
<th>Product</th>
<th>Packaging</th>
<th>Catalog Number</th>
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<tbody>
<tr>
<td>High Range Activated Clotting Time (HR-ACT)</td>
<td>50 cartridges/box</td>
<td>402-03</td>
</tr>
<tr>
<td>Low Range Activated Clotting Time (LR-ACT)</td>
<td>50 cartridges/box</td>
<td>402-01</td>
</tr>
<tr>
<td>Heparinase Test Cartridge (HTC)</td>
<td>20 cartridges/box</td>
<td>402-07</td>
</tr>
<tr>
<td>Recalcified Activated Clotting Time (RACT)</td>
<td>50 cartridges/box</td>
<td>402-02</td>
</tr>
<tr>
<td>General Purpose Cartridge (GPC)</td>
<td>50 cartridges/box</td>
<td>402-06</td>
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<tr>
<td>CLOTtrac® HR-ACT Control (normal)</td>
<td>15 vials each control/diluent</td>
<td>550-07</td>
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<tr>
<td>CLOTtrac® HR Abnormal Control</td>
<td>15 vials each control/diluent</td>
<td>550-08</td>
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<tr>
<td>CLOTtrac® HR Control Pack</td>
<td>15 vials each control/diluent</td>
<td>550-13</td>
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<tr>
<td>CLOTtrac® CWB Control (normal)</td>
<td>15 vials each control/diluent</td>
<td>550-01</td>
</tr>
<tr>
<td>CLOTtrac® LR Abnormal Control</td>
<td>15 vials each control/diluent</td>
<td>550-09</td>
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<tr>
<td>CLOTtrac® HTC Control</td>
<td>15 vials each control/diluent</td>
<td>550-12</td>
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<tr>
<td>CLOTtrac® RACT Abnormal Control</td>
<td>15 vials each control/diluent</td>
<td>550-10</td>
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<tr>
<td>ACTtrac® Electronic Control</td>
<td>Each</td>
<td>31363</td>
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<td>Calcium Chloride (for LR-ACT Controls)</td>
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<td>Temperature Verification Cartridge</td>
<td>1 per package</td>
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<tr>
<td>Actuator Cleaning Kit</td>
<td>Each</td>
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