

PRECISE, RELIABLE THE TRUSTED STANDARD

ACT Plus™ System

Automated Coagulation Timer



ACT Plus™ System

The ACT Plus™ Automated Coagulation Timer is recognized worldwide as the trusted standard for activated clotting time testing, delivering the accurate, precise and timely results you need.



PRECISE, RELIABLE CLOT DETECTION TECHNOLOGY

The ACT Plus™ System combines the trusted standard in precise clot detection technology with data management and connectivity-ready capabilities. Unlike algorithm-based test measurement, the ACT Plus™ System provides real-time clot detection, ensuring accurate and precise clotting time results.

SYSTEM HIGHLIGHTS

- Dual well testing verifies your results are accurate
- Real-time clot detection ensures precise results
- Connects to industry standard point-of-care LIS interfaces, including MAS RALS®-Plus, TELCOR Quick-Linc®, AegisPOC®, and others.*
- Enhanced data management meets all POC testing requirements
 - Stores up to 1000 patient and QC records
 - Holds up to 600 operator IDs
 - Downloads data to a USB or floppy storage device
 - Enables QC and user lockout
 - Bar code scanner available for quick, accurate entry of cartridge and control information, and patient and user IDs

*Check with your local Medtronic representative for country-specific information.

The ACT Plus™ System is used with point-of-care testing during critical procedures, when accurate ACT results are necessary.

- Cardiovascular and vascular surgery
- Cardiac catheterization lab
- Critical care units
- Hemodialysis units
- Pediatric care
- ECMO
- Interventional radiology

Medtronic is the global leader in medical technology — alleviating pain, restoring health, and extending life for millions of people around the world. As an acknowledged expert in the area of blood management and clot detection technology for more than 20 years, Medtronic leads the way in delivering reliable, cost-effective solutions.

CARTRIDGES, CONTROLS AND ACCESSORIES

Quality Control

A full range of controls are available to verify instrument, cartridge and operator performance and meet regulatory guidelines for testing.

OUR UNIQUE DUAL CHANNEL CARTRIDGE DESIGN ALLOWS YOU TO INSTANTLY VERIFY YOUR RESULTS, ELIMINATING THE NEED TO RETEST.

- Real-time clot detection reflects patient's ability to form a clot (rather than mathematically calculated results)
- Liquid suspended Kaolin activator for uniform mixing with blood sample
- Room temperature storage saves refrigerator space

MULTIPLE TESTING APPLICATIONS

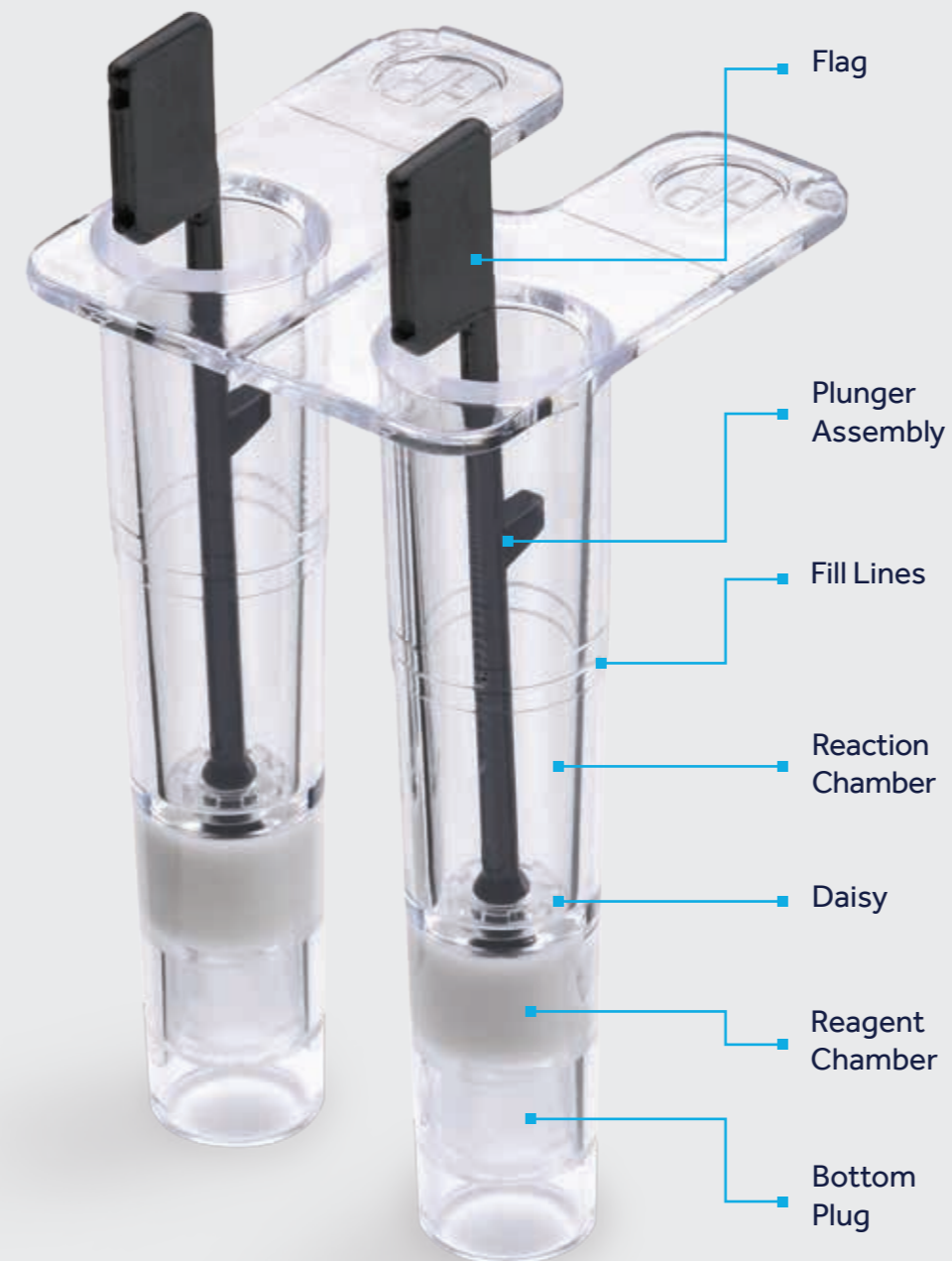
- **High Range Activated Clotting Time (HR-ACT)** for use with fresh whole blood samples in cardiovascular surgery, vascular surgery and percutaneous transluminal coronary angioplasty (PTCA)
- **Low Range Activated Clotting Time (LR-ACT)** for use with fresh whole blood samples in dialysis, ECMO and therapeutic heparin monitoring
- **Recalcified Activated Clotting Time (RACT)** for use with citrated whole blood samples in dialysis and therapeutic heparin monitoring
- **Heparinase Test Cartridge (HTC)** for use with fresh whole blood samples to identify the presence of presurgical and postsurgical heparin in various clinical settings, allowing you to:
 - Determine baseline clotting time in the presence of heparin
 - Determine the appropriate time to pull sheath
 - Confirm heparin reversal
 - Identify heparin rebound

High Range ACT Precision				
	Baseline ACT (sec) (0 units/ml heparin)		Heparinized ACT (sec) (4 units/ml heparin)*	
	Within lot	Between lot	Within lot	Between lot
Mean	130	130	582	582
SD	3.3	6.6	19.0	27.1
%CV	2.6%	5.1%	3.3%	4.7%
N	63	63	162	162

*Internal Medtronic Data

The HR Heparinase Cartridge is a two channel activated clotting time test: Channel 1 with heparinase and Channel 2 without. The clotting time results for the two channels are compared.

Example for Interpreting HR Heparinase Results		
Channel 1 (with heparin)	Channel 2 (without heparin)	Interpretation
120	120	Patient at baseline. No heparin in sample.
120	260	Sample contains heparin. Extension due to effect of heparin only.
260	260	May be an underlying coagulopathy unrelated to heparin.
260	360	Heparin in the blood sample and patient may have an underlying coagulopathy.



CLOTtrac™ Coagulation Controls

Lyophilized controls provide sufficient volume for testing with multiple instruments.



ACTtrac™ Electronic Control

Provides a multi-level quality check to make quality control easier and faster to perform.



ACT™ Easy Fill Accessory

- Fill lines are easily visible, even in low light settings
- Needleless system
- Available for high range and low range cartridges

ORDERING INFORMATION

ACT Plus™ System Components

Catalog Number	Description
ACT100	ACT Plus™ Instrument
ACT200	ACT Plus™ Instrument Outside US Version
ACTSC	ACT Plus™ Bar Code Scanner
31363	ACTtrac™ Electronic Control for ACT Plus™
ACTEDM	ACT Plus™ External Data Manager Software

Cartridges and Controls

Catalog Number	Description	Packaging
ACT™ Disposable Test Cartridges		
402-03	High Range Activated Clotting Time (HR ACT™)	50 cartridges per box
402-01	Low Range Activated Clotting Time (LR ACT™)	50 cartridges per box
402-07	Heparinase Test Cartridge (HTC)	20 per box
402-02	Recalcied Activated Clotting Time (RACT™)	50 cartridges per box
Act™ CLOTtrac™ Coagulation Controls		
550-07	CLOTtrac™ HR Coagulation Control	15 vials* per box
550-08	CLOTtrac™ HR Abnormal Coagulation Control	15 vials* per box
550-13	CLOTtrac™ HR Control Pack	1 box of HR 550-07 and 1 box of 550-08
550-01	CLOTtrac™ CWB Control (normal) – for Low RangeACT™ and RACT cartridges	15 vials* per box
550-09	CLOTtrac™ LR Abnormal Coagulation Control	15 vials* per box
550-10	CLOTtrac™ RACT Abnormal Coagulation Control	15 vials* per box
550-11	Calcium Chloride – for use with the Low Range ACT controls	1 vial per box
550-12	CLOTtrac™ HTC Coagulation Control	15 vials* per box
ACT™ Accessories		
313-11	Temperature Verification Cartridge for ACT Plus™	1 per box
313-50	HEPline Kit	Each
303-58	Actuator Cleaning Kit	Each
ACTFILHR	High Range ACT™ Easy Fill Accessory	100 per box
ACTFILLR	Low Range ACT™ Easy Fill Accessory	100 per box

* 15 vials of control and deionized water

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ACT Plus™ System Specifications

Dimensions

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

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
- USB: used with Medtronic approved USB storage device

Power

Voltage: 100-240 V ~ Single Phase
 Frequency: 50-60 Hz
 Maximum Current: 1.0 A (100-240)

Operating Limits

Temperature: 14°C to 32°C
 (57°F to 90°F)
 Humidity: 10% to 90%,
 noncondensing

Storage Limits

Temperature: 0°C to 49°C
 (32°F to 120°F)
 Humidity: 5% to 90%,
 noncondensing

Warnings: Proper Instrument and Cartridge Use The ACT Plus System must only be used in the manner and purpose for which they are intended. Instructions for proper use are included in the manual and in the cartridge package inserts. Read all warnings, precautions and Instructions for Use carefully prior to use.

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