



# Thrombotrack™ Solo

IVD

GB

## Instruction Manual



CE

Manufacturer: Axis-Shield PoC AS  
Oslo, Norway

150905\_Solo\_Man\_GB\_Ed.2005-11

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### General information

This instruction manual contains information necessary for installation and operation of the Thrombotrack™ Solo.

Chapter 7 specially covers warnings and precautions. In addition, and in connection with relevant chapters, important information with respect to security and optimum use of Thrombotrack™ Solo is described. The first indication of such information is:

**IMPORTANT!**      *The users must conscientiously read and understands these instructions to fully utilize the capabilities of the Thrombotrack™ Solo!*

This instruction manual is valid for Thrombotrack™ Solo with software version later than V. 2.02.

## 1 Intended use of Thrombotrack™ Solo

Thrombotrack™ Solo is a 1-channel, processor driven instrument for measurement of coagulation analysis. Coagulation is detected by the viscosity change, which occurs upon clot formation. This patented system enables analyses of all coagulation parameters using whole blood or plasma samples.

For PT tests the instrument can calculate the INR value.

## 2 Installation and environmental conditions

### 2.1 Package unit

The contents of the package unit for Thrombotrack™ Solo, material number 1114717 is:

Thrombotrack™ Solo	1 unit
Cuvettes	1x500 units
Steel balls	1x500 units
Steel ball dispenser	1 unit
Mains adapter 230 V-12 V	1 unit
Dust cover	1 unit
Instrument Warranty Card	1 unit

### 2.2 Unpacking of Thrombotrack™ Solo

Check the package for any signs of shipping damage.  
Open the package and take out the accessories and the instrument.

Check the contents for completeness according to information in chapter 2.1 and sign the Instrument Warranty Card following package unit.

**IMPORTANT!**      *If package or contents is damaged, or anything is missing, contact your local distributor.*

### 2.3 Placing of Thrombotrack™ Solo

Select a location where the instrument is not exposed to direct sunlight, excess heat, humidity, dust or vibrations.

To ensure that the measuring block's temperature control (37°C) can work properly, the room temperature should be between 17°C and 28°C.

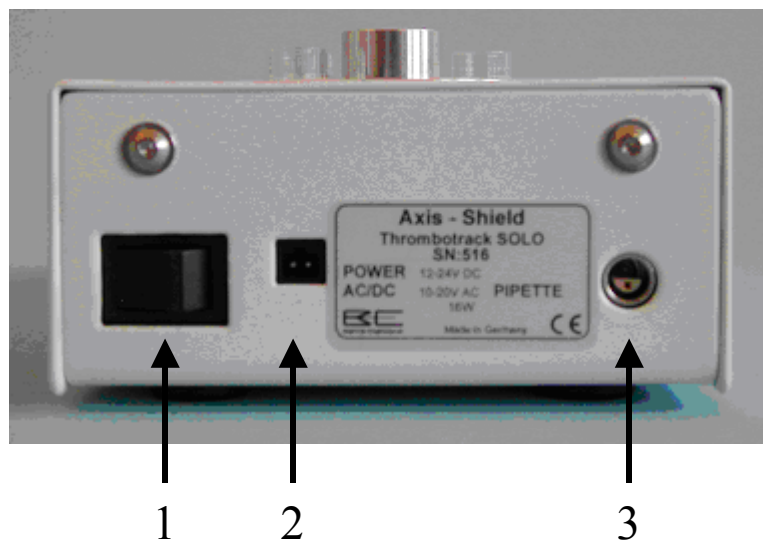
Place the instrument in a position that allows unhindered access to the power outlet at any time.

**IMPORTANT!**      *Do not install next to water fittings, baths, sinks, etc.  
Do not install near centrifuges, washers, dishwashers, etc.  
Do not install near to radiators or other sources of heat, etc*

Place the instrument on a sturdy, level surface.

### 2.4 Turn on Thrombotrack™ Solo

Place the instrument on a sturdy, level surface and follow the instruction below.



1. "POWER" switch
2. "AC/DC" socket
3. "PIPETTE" socket

**Figure 1**

1. Set the switch (1) at the rear of the Thrombotrack™ Solo to position "0".
2. Plug the cord of the AC adaptor into the socket (2).
3. Plug the cord of the start pipette into the socket (3)  
(Start pipette is optional).
4. Check that all cords and cables are properly connected.

5. Plug the AC adaptor into the mains socket outlet.

6. Turn on the Thrombotrack™ Solo with switch (1).

**IMPORTANT!** *The mains voltage must coincide with the technical specifications of the instrument.*

*The mains circuit must have adequate fuse protection.  
The instrument must be connected to a properly grounded outlet only. If in doubt about mains voltage or the circuit in general, contact a qualified electrician.*

*Do not connect other electrical appliances that may cause interference to the circuit.*

*Do not set up the instrument near electrical appliances causing electric interference (appliances bearing no CE-label).*

*Avoid connection to circuits to which other appliances having a high current draw (e.g. centrifuges) or which turn on and off frequently (e.g. refrigerator, water bath, etc.) are connected.*

*Ensure that the power cord cannot be stepped on.*

*All connections to the instrument should be made with the instrument turned OFF.*

### **2.5 Turn off Thrombotrack™ Solo**

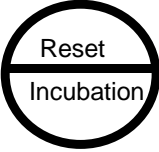
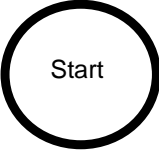
1. Turn the Thrombotrack™ Solo off using the “POWER” switch (1).

2. Remove all used cuvettes and cover the instrument with the dust cover supplied.

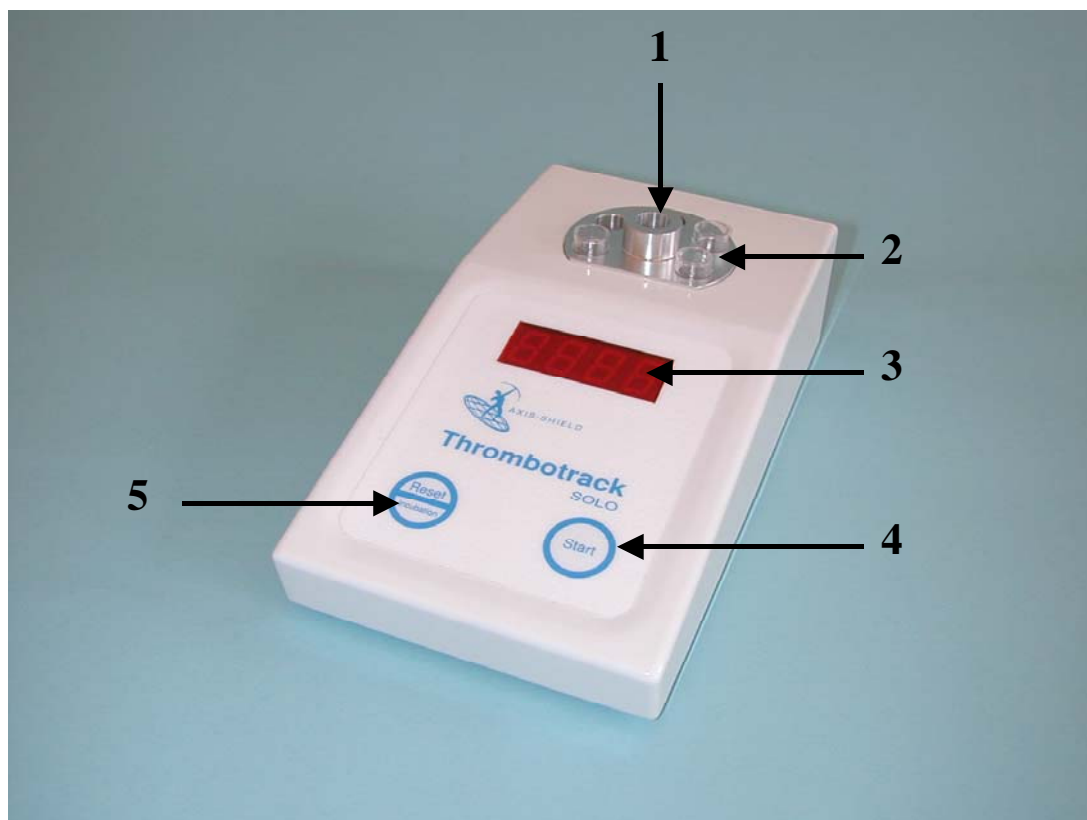
### 3 Functional description of Thrombotrack™ Solo

#### 3.1 Symbols on Thrombotrack™ Solo

Two buttons as showed in the table below operate Thrombotrack™ Solo.

Buttons		Synonymous with
Symbols		<RESET/INCUBATION>
		<START>

#### 3.2 Functional parts of Thrombotrack™ Solo



**Figure 2**

1. Measuring position
2. Heating positions
3. Display
4. <START> button
5. <RESET / INCUBATION> button

### 3.3 Description of <START> and <RESET / INCUBATION> buttons

#### 3.3.1 In testing mode

Buttons	Function	Description
<START>	<b>Manual start (with standard pipette)</b>	This button activates countdown. Display counts down from 3 seconds. At 0, the measuring time starts. The sample (or start reagent) is added simultaneously
	<b>Display of INR</b>	When timer stops, the value is displayed in seconds first. By pressing <START>, the INR-value appears. If <START> is pressed once again, the second value will return on the display.
<RESET/INCUBATION>	<b>Reset</b>	The <RESET/INCUBATION> key resets the timer after measurement and 0.0 is displayed
	<b>Incubation</b>	<p>When the timer is set to 0.0, the incubation time in second intervals is counted by pressing &lt;RESET/INCUBATION&gt;.</p> <p>To differentiate this time from coagulation time, the decimal point flashes. Press &lt;RESET&gt;. The instrument is now ready for the next test.</p> <p>The incubation timer can be started if there is no measuring being done at the same time</p>

### 3.3.2 Programming Normal Time and ISI

1. Press and hold the <RESET/INCUBATION> button and turn the Thrombotrack™ Solo ON with the “POWER” switch.  
The display shows “*nt*” (normal time). When the button is released the normal time is displayed, e.g. “10.0”.
2. Use the <RESET/INCUBATION> and/or <START> buttons to set the desired normal time. Pressing <RESET/INCUBATION> lowers the normal time while <START> increases it. When the normal time is set, it is automatically saved after 2 seconds. A beep and the message “*SAVE*” in the display indicate that it has been stored.
3. Turn the Thrombotrack™ Solo OFF with the “POWER” switch.
4. Press and hold the <START> button and turn the Thrombotrack™ Solo ON with the “POWER” switch.  
The display shows “*ISI*” (International Sensitivity Index), when the button is released the ISI value is displayed, e.g. “1.00”.
5. Use the <RESET/INCUBATION> (DOWN) and/or <START> (UP) buttons to set the ISI value. Once the ISI value is set, it will be automatically saved after 2 seconds. A beep and the message “*SAVE*” in the display indicate that it has been stored.
6. Turn the Thrombotrack™ Solo OFF with the “POWER” switch.
7. Turn the Thrombotrack™ Solo ON again with the “POWER” switch.  
The Thrombotrack™ Solo is now ready for use.

**Input - limits:** Normal time: 7 to 120 seconds  
ISI 0.5 up to 4

#### **Ranges:**

INR – calculation: From blank time (3.9 seconds) up to 300 seconds. For measuring times  $\geq 300.0s$  “*E2*” is displayed

A measuring time  $\leq 50\%$  of the programmed normal time is not calculated in INR

Example:

Normal time = 20.0s, measuring time = 9.9s.

A calculation of the INR value is not possible.

INR – resolution: 2 decimals, max possible error 0.02 at INR  $> 0.5$   
 $< 10$

Max measurement time for other tests: From blank time (3.9 seconds) up to 999 seconds

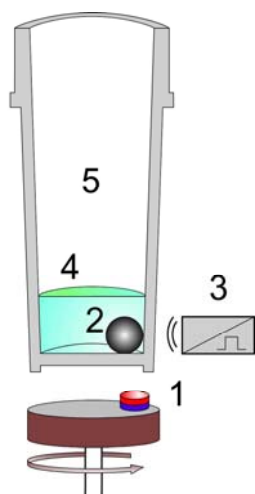
### 3.3.3 Incubation timer

The incubation timer can only be started when no analysis is running.

Procedure for activating/deactivating incubation timer:

1. Press the <RESET/INCUBATION> button. The display changes from “0.0” to “0” and displays the elapsed time in seconds. To distinguish the incubation timer display from the coagulation time display the decimal point is flashes.
2. Press the <RESET/INCUBATION> button again and Thrombotrack™ Solo is ready for the next test.

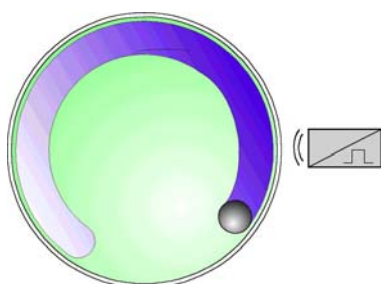
### 3.4 The measuring system



A magnet (1) is located beneath the cuvette (5), which causes the steel ball (2) to rotate. This enables the sample to be optimally and gently homogenised (4). A sensor (3) is used to monitor the rotation of the steel ball. As a result of clot formation, the viscosity changes and causes the ball either to stop or divert towards the middle of the cuvette. In both cases, the sensor signals the change and stops the measurement.

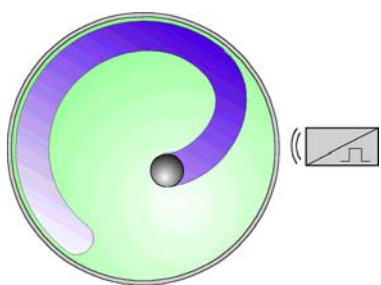
The clot formation is reliably detected and without interference from turbid plasma.

Figure 3



When coagulation starts, the viscosity of the sample changes and affects the continuous motion of the ball. When a strong clot is formed, the steel ball will stop as shown in figure 4.

Figure 4



A weak clot will deflect the ball towards the center of the cuvette's base (figure 5). The sensor detects the changed course of the ball and stops the measurement.

Figure 5

In both cases the start of the clotting process is positively detected, irrespective of the sample's cloudiness.

### 3.5 *Functionality of Thrombotrack™ Solo*

Thrombotrack™ Solo determines the clotting time of citrated whole blood, citrated capillary blood, capillary blood and plasma, by using the measuring principle as described in chapter 3.4.

The following tests can be performed with the Thrombotrack™ Solo:

- PT                      Prothrombin time
- PTT / APTT          Activated partial thromboplastin time
- TT                      Thrombin clotting time
- FIB                      Fibrinogen (Clauss method)
- FAC                      Coagulation factor activity

Thrombotrack™ Solo has the following functions:

- Automatic start when reagent is added with the start pipette
- “Count-Down” start with standard pipette
- Reaction process monitoring
- Notification of critical events
- Automatic checking
- Display of the measuring time in seconds
- Display of coagulation activity as INR

## **4 Preparation prior to operation**

The operating conditions and how to turn Thrombotrack™ Solo on are described in chapter 2.3 and 2.4.

### **4.1 Connecting start pipette**

A start pipette for automatic start of measurement can be connected to the back of the instrument.

### **4.2 Loading the steel ball dispenser**

- Unscrew the steel ball dispenser tip.
- Fill steel balls from the steel ball tube into the ball dispenser.
- Screw the steel ball dispenser tip on again.

## **5 Operating procedure**

### **5.1 General**

The operating procedures described in this chapter include the specific procedures for Thrombotest™, Normotest™, Nycotest® PT, Nycoplastin™ and Cephotes™. It is presupposed that reagent preparation is completed and correct. For PT tests the normal time and ISI are programmed as described in chapter 3.3.2.

When working with the Thrombotrack™ Solo, always pay attention to methods and reagents described in the package inserts. Discrepancies can cause errors in measurements.

Chapter 6, “User guidelines”, gives information related to the use of reagents, calibrators and controls.

### **5.2 Starting up**

Turn the instrument on by using the switch on the back of the instrument. Message “cold” appears. The “cold” message remains until the Thrombotrack™ Solo has reached the correct operating temperature.

When working temperature is reached “0.0” appears.

Instrument is now ready for use.

Note: At a room temperature of approx. 23°C the heating-up time is approx. 10 - 15 minutes.

### **5.3 General information during operation**

Before starting the specific operating procedure, the following information should be considered:

- Cuvettes:** Single cuvettes are used
- Dispensing steel balls:** When dispensing steel balls, by means of the steel ball dispenser, into each cuvette, the dispenser should be placed on the cuvette in such a manner that the steel ball is kept from ricocheting.
- Pre-heating**
- In the operating procedures for Thrombotest™, Normotest™ and Nycotest® PT it is expected that the method specific reagent volume is heated up 37°C.
- For Nycoplastin™ and Cephotest™, a sufficient volume for running the required number of tests must be pre-heated. In order to reach the temperature of 37°C in the heating position, the volume of the reagent must not exceed 1.2 mL. The time required depends on the reagent temperature and may take 5 - 8 minutes.
- Incubation timer** For activation of incubation timer, see chapter 3.3.3

**5.4 Operating procedure, Thrombotest™**

**5.4.1 Citrated whole blood method, 50 µL (“diluted method”)**

Volumes:

Sample volume: 50 µL citrated whole blood

Reagent volume: 250 µL

Main steps		Procedure details	
<b>A</b>	<b>Pre- measurement</b>	I	Place cuvettes in the pre-heating positions and add one ball to each with the ball dispenser
		II	Pipette 250 µL of reagent into the cuvette and pre-heat for 5 min.  Frozen reagent must be preheated for 15 minutes
		III	Place cuvette for measurement in the measuring position
<b>B</b>	<b>Auto start</b>	I	Pipette 50 µL of sample into the cuvette with the start pipette
	<b>Manual start W/count down</b>	II	Press <START>. The display counts down from 3 seconds. At 0, and signal tone, pipette 50 µL of sample into the cuvette with a standard pipette
<b>C</b>	<b>Coagulation end point</b>	I	Upon clotting, the timer stops and the value in seconds is displayed
<b>D</b>	<b>Reading INR</b>	I	Press <START>. INR-value is displayed  Press <START> once again. The value in seconds is displayed

When <RESET/INCUBATION> is pressed, the instrument is ready for the next test.

**5.4.2 Capillary blood method**

Volumes:

Sample volume: 50 µL capillary blood

Reagent volume: 250 µL

The operating procedure is the same as for 5.4.1.

**5.4.3 Plasma method, 30 µL (“undiluted plasma”)**

Volumes:

Sample volume: 30 µL undiluted plasma

Reagent volume: 250 µL

The operating procedure is the same as for 5.4.1 with the exception of the sample volume (5.4.1, step B I or B II).

**5.5 Operating procedure, Normotest™**

**5.5.1 Citrated whole blood method, 25 µL (“diluted method”)**

Volumes:

Sample volume: 25 µL citrated whole blood

Reagent volume: 250 µL

<b>Main steps</b>		<b>Procedure details</b>	
<b>A</b>	<b><i>Pre- measurement</i></b>	I	Place cuvettes in the pre-heating positions and add one ball to each with the ball dispenser
		II	Pipette 250 µL of reagent into the cuvette and pre-heat for 5 min.
		III	Place cuvette for measurement in the measuring position
<b>B</b>	<b><i>Auto start</i></b>	I	Pipette 25 µL of sample into the cuvette with the start pipette
	<b><i>Manual start W/count down</i></b>	II	Press <START>. The display counts down from 3 seconds. At 0, and signal tone, pipette 25 µL of sample into the cuvette with a standard pipette
<b>C</b>	<b><i>Coagulation end point</i></b>	I	Upon clotting, the timer stops and the value in seconds is displayed
<b>D</b>	<b><i>Reading INR</i></b>	I	Press <START>. INR-value is displayed
			Press <START> once again. The value in seconds is displayed

When <RESET/INCUBATION> is pressed, the instrument is ready for the next test.

**5.5.2 Plasma method, 15 µL (“undiluted method”)**

Volumes:

Sample volume: 30 µL undiluted plasma

Reagent volume 250 µL

The procedure is the same as in 5.5.1, except for the sample volume (5.5.1, step B I or B II).

**5.6 Operating procedure Nycotest® PT**

Volumes:

Sample volume: 100 µL diluted plasma \*

Reagent volume: 200 µL

\* Plasma must be diluted 1+6 with Nycotest® PT Dilution Liquid

<b>Main steps</b>		<b>Procedure details</b>	
<b>A</b>	<b><i>Pre- measurement</i></b>	I	Place cuvettes in the pre-heating positions and add one ball to each with the ball dispenser
		II	Pipette 200 µl reagent into the cuvette and pre-heat for 5 min.
		III	Place cuvette for measurement in the measuring position
<b>B</b>	<b><i>Auto start</i></b>	I	Pipette 100 µL of sample into the cuvette with the start pipette
	<b><i>Manual start W/count down</i></b>	II	Press <START>. The display counts down from 3 seconds. At 0, and signal tone, pipette 100 µL of sample into the cuvette with a standard pipette
<b>C</b>	<b><i>Coagulation end point</i></b>	I	Upon clotting, the timer stops and the value in seconds is displayed
<b>D</b>	<b><i>Reading INR</i></b>	I	Press <START>. INR-value is displayed
			Press <START> once again. The value in seconds is displayed

When &lt;RESET/INCUBATION&gt; is pressed, the instrument is ready for the next test.

**5.7 Operating procedure Nycoplastin™**

Volumes:

Sample volume: 100 µL undiluted plasma  
 Reagent volume: 200 µL

<b>Main steps</b>		<b>Procedure details</b>	
<b>A</b>	<b><i>Pre- measurement</i></b>	I	Place a cuvette in one of the pre-heating positions and heat up sufficient amount of reagent up to 37°C
		II	Place cuvettes in the other pre-heating positions and add one ball to each by the steel ball dispenser
		III	Pipette 100 µl of plasma into the cuvette and incubate for 60 sec.
		III	When incubation of plasma is completed, move the cuvette to the measuring position
<b>B</b>	<b><i>Auto start</i></b>	I	Pipette 200 µL of pre-heated reagent into the cuvette with the start pipette
	<b><i>Manual start W/count down</i></b>	II	Press <START>. The display counts down from 3 seconds. At 0, and signal tone, pipette 200 µL of pre-heated reagent into the cuvette with a standard pipette
<b>C</b>	<b><i>Coagulation end point</i></b>	I	Upon clotting, the timer stops and the second value is displayed
<b>D</b>	<b><i>Reading INR</i></b>	I	Press <START>. INR-value is displayed  Press <START> once again. The value in seconds is displayed

**5.8 Operating procedure Cephotest™**

Volumes:

Sample volume: 100 µL undiluted plasma

Cephotest reagent: 100 µL

CaCl<sub>2</sub>, 20 mM: 100 µL

<b>Main steps</b>		<b>Procedure details</b>	
<b>A</b>	<b><i>Pre-measurement</i></b>	I	Place a cuvette in one of the pre-heating positions and heat up sufficient amount of CaCl <sub>2</sub> to 37°C
		II	Place cuvettes in the pre-heating positions and add one ball to each with the ball dispenser
		III	Pipette 100 µL of plasma into a cuvette in the pre-heating position
		IV	Pipette 100 µL of Cephotest™ reagent into the cuvette with 100 µL plasma and incubate for 6 min.
		V	When incubation of plasma and reagent is completed, move the cuvette to the measuring position
<b>B</b>	<b><i>Auto start</i></b>	I	Pipette 100 µl CaCl <sub>2</sub> into the cuvette with the start pipette
	<b><i>Manual start W/count down</i></b>	I	Press <START>. The display counts down from 3 seconds. At 0, and signal tone, pipette 100 µL of pre-heated CaCl <sub>2</sub> into the cuvette with a standard pipette
<b>C</b>	<b><i>Coagulation end point</i></b>	I	Upon clotting, the timer stops and the value in seconds is displayed

**6 User guidelines****6.1 Use of reagent**

The package inserts for reagents from Axis-Shield PoC provide all information necessary for reagent preparation and use. The same applies to the respective controls and calibrators.

Always follow this information; improper use may result in incorrect results.

Where several options of performance are described (e.g. for automated instruments), the instructions concerning manual performance of the test prevail.

When using smaller volumes than those stated in the package inserts, it is important to reduce all pipetting volumes by same percentage. Make sure that the total sample volume is not less than 150 µl.

### 6.2 Calibration and interpretation of results

The measured time is the time from adding the sample (or start reagent) until the occurrence of coagulation. This time value is the basis for an evaluation.

PT kits from Axis-Shield PoC contain inserts with reagent and batch specific calibration data (Correlation tables). If there is any uncertainty regarding use of calibration data on the Thrombotrack™ Solo, contact your local distributor.

The package insert from Axis-Shield PoC provides information on how to interpret results obtained.

The description of how to enter normal time and ISI on the Thrombotrack™ Solo is given in chapter 3.3.2.

### 6.3 Quality Control

To control the instrument, reagent and test method, special control plasmas are used. In the package inserts from Axis-Shield PoC, the recommended controls are listed.

The package inserts for the controls give all information for preparation and use of the control plasmas. Always follow this information; improper use may result in incorrect results. The control kits also included data-key with recommended values. Control plasmas available from Axis-Shield PoC are:

Control plasmas	Thrombotest	Normotest	Nycotest PT	Nycoplastin	Cephotest
Control Plasma Normal		R	R	R	R
Control Plasma AK	R	R	R	R	
Control Plasma Abnormal	R	R	R	R	R
Control Plasma Heparin					R

R means recommended values stated in the data-keys.

### 6.4 Operational check of the Thrombotrack™ Solo

- Start an analysis without placing a cuvette in the measuring channel. After 3.8 seconds “E5” will appear in the display, meaning the instrument has not detected a cuvette in the measuring channel.
- Dispense a ball into a cuvette and fill it with at least 150µL distilled water or buffer. Place a cuvette in the measuring channel and press <START>. After a time longer than 3.8

seconds, pull the cuvette out of the measuring channel. The counting stops and displays the corresponding “measuring result”, e.g. “10.6” seconds.

### **7 Warnings and precautions**

- All biological substances should be regarded as a potential source of infection
- Wear gloves when handling blood, blood samples and objects contaminated by blood
- Follow the existing regulations pertaining to the handling and manipulation of reagents for laboratory use and blood samples
- Only Trained laboratory personnel shall operate this instrument.
- Thrombotrack™ Solo generates and uses high-frequency energy and may radiate such energy if the product is not installed and operated as detailed in these instructions.
- Follow all warnings and notes affixed to the instrument or mentioned in the instructions.
- Intervention in and modification of the product, not explicitly approved by the equipment manufacturer, may render it inoperative.
- The equipment manufacturer is not liable for any damage resulting from disregard of the specifications stated in these instructions, damage caused by handling of reagents and biological fluids or other action with the product not in conformity with these instructions.

## 8 Trouble shooting

### 8.1 Error description

Problem	Possible cause	Corrective actions
Early stop or poor viscosity	<p>Pipetting too forceful Sample preparation Volume error</p> <p>A ball may be present in the measuring channel</p>	<p>This may cause bubbling, which disturbs the movement of the ball and thus the measuring. In this case the sample preparation should be checked.</p> <p>If a ball was dispensed by mistake directly into the measuring channel and a cuvette is set into the measuring channel afterwards, the system is unable to work properly as the cuvette position is too high. Remove the ball from the measuring channel using pointed tweezers. Discard the ball removed from the measuring channel as it will have become magnetized.</p>
Measuring does not stop	<p>Sample preparation Volume error</p>	<p>The system does not detect any clotting. In this case the sample preparation should be checked. With Fibrinogen too much dilution of the plasma may also be the cause.</p>
Display indicates “hot”	<p>The temperature of the measuring block is too high</p>	<p>One reason may be exposure to direct sunlight or installation close to a heater/radiator, which provides additional heating of the measuring block. In this case the location should be changed.</p> <p>Another reason may be too high a room temperature (&gt; 30°C).</p>
Display indicates “cold”	<p>The temperature of the measuring block is too low</p>	<p>The instrument is exposed to a cold draft or placed near an opened window.</p> <p>The instrument should be relocated.</p>

**8.2 Error Messages**

Error Message	Possible cause	Corrective actions
Measuring result flashes	The automatic ball monitoring signals an extremely small blood clot or fault in the ball movement	To be on the safe side the analysis should be repeated
“cold” “hot”	Measuring block too hot Measuring block too cold	The warning limits are at $\pm 1^{\circ}\text{C}$ . The messages are cancelled again at $\pm 0.6^{\circ}\text{C}$ (hysteresis $0.4^{\circ}\text{C}$ )
“OL”	INR value too high	Check INR parameters and measuring time
“E2”	Measuring time too long	Check INR parameters and measuring time
"E5"	Low signal. No cuvette or steel ball	Check the cuvette/steel ball. Press <RESET/ INCUBATION>, prepare and perform analysis again
"E6"	The signal is not correct	The instrument needs service. Contact your local distributor or service
"E7"	Large pulse width	There might be two balls in the cuvette. Check inside the cuvette. Press <RESET/ INCUBATION>, prepare and perform analysis again
"E8"	Small pulse width	Adjusting failure or defect sensor. The instrument needs service
"E0"	Maximum measuring time exceeded	Press <RESET / INCUBATION>, prepare and perform analysis again. With Fibrinogen over dilution of the plasma may also be the cause.
"E9"	Fatal software error	Contact your local distributor or service.

### 9 Cleaning

To clean the Thrombotrack™ Solo, use an absorbent paper moistened with a solution of alcoholic or wiping disinfectant of a pH-value between 7.4 and 9.0.

Any other detergents having a higher pH-value may cause damage to the housing, measuring block or other components.

**IMPORTANT!**      *Do not use cleaners containing ammonium chloride, as normally their pH-value is higher than 9.0!*

### 10 Maintenance

The Thrombotrack™ Solo and its measuring system are maintenance-free. The system does not require calibration of the detection system. Changes in the system (e.g. aging of the sensor) are automatically compensated for.

### 11 Warranty declaration

Axis-Shield PoC guarantees a warranty period of 12 months from the date of delivery to the user. For this period it is guaranteed that the Thrombotrack™ instrument works within quality requirements valid on the date of manufacture release.

Axis-Shield PoC is prepared to compensate for faulty material or malfunctions within the limitations of the warranty.

Tampering with the internal components, damage due to operating errors, misuse and overlooking essential information with respect to warnings and precautions described in this User Manual will invalidate the warranty.

The acknowledgment of claims shall immediately be reported to your local supplier.

### 12 Technical data

<b>Specifications</b>		
	Thrombotrack™ Solo	
Protection class	I	
Working voltage	12 - 24VDC or 10 / 20VAC	
Power input	18W	
	AC adaptor	
Protection class	II	
Working voltage	230V AC ± 10% / 50 - 60 Hz	
Power output	20VA	
<b>Dimensions</b>		
	Thrombotrack™ Solo	Thrombotrack™ Solo with packing
L x W x H	20.7cm x 11.3cm x 6.8cm	40cm x 30cm x 18cm
Weight	1.1kg	3.1kg
	Space required	
L x W x H	40cm x 50cm x 50cm	
<b>Ambient Conditions</b>		
Operating temperature	+17°C - +28°C	
Storage temperature	+10°C - +40°C	
Rel. humidity	80% at 31°C - 50% at 40°C	
Maximum heat output	20W	
Over voltage class	II	
According to Annex J, EN 61010-1:1993		
Usage environment	Indoor use in residential areas, commercial dwellings and light industrial environments	
<b>Test Volume (sample + reagent)</b>		
Minimum	150µl	
Maximum	400µl	
<b>Accessories</b>		
	Product number	
Start Pipette 20 - 200µl	1114960	
Cuvettes 500 pcs	1109651	
Steel balls 500 pcs	1003382	