

# Coamatic® Heparin



***CHROMOGENIX***

# Coamatic<sup>®</sup> Heparin

## **A**nti FXa method

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Coamatic Heparin measures the ability of heparin to catalyze the inhibition of FXa by antithrombin. The anti-FXa assay is the method of choice when monitoring LMW heparin therapy and is also suitable as a replacement for the APTT test when monitoring therapy with unfractionated heparin.

### **M**ethod principle

Factor Xa is added in excess to a mixture of the plasma sample and chromogenic substrate. Two competing reactions then occur simultaneously:

- Inhibition of FXa by the antithrombin-heparin complex.
- Hydrolysis of the substrate by FXa resulting in the release of pNA.

The quantity of pNA that is released is inversely proportional to the concentration of heparin in the sample.

## **F**or the monitoring of LMW and UF heparin

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Coamatic Heparin is optimised for the determination of both low molecular weight (LMW) heparin and unfractionated (UF) heparin. Coamatic Heparin is the kit of choice for laboratories monitoring both types of heparins as it offers optimal flexibility.

## **U**ser convenient

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With Coamatic Heparin the laboratory can simplify its testing of heparin. Few components and easy reagent preparation, together with a simple, straight forward assay procedure, all add up to optimal user convenience.

## **U**ndiluted assay

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The Coamatic Heparin assay is performed with undiluted plasma on almost all instruments. This means time saving as well as reduced cuvette consumption.

## **S**uperior reagent stability

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The high stability of the reconstituted reagents provides for economical use of the Coamatic Heparin kits and makes them suitable for both large and small laboratories.

## **V**alidated and documented protocols for a wide range of instruments

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Coamatic Heparin has been designed for use with most automated instruments. The one stage principle means an increased flexibility for the incubation times, as no reaction takes place until the last reagent (factor Xa) is added. Thoroughly validated and documented protocols are available for a wide number of instruments currently available in the market. A microplate protocol is also available.

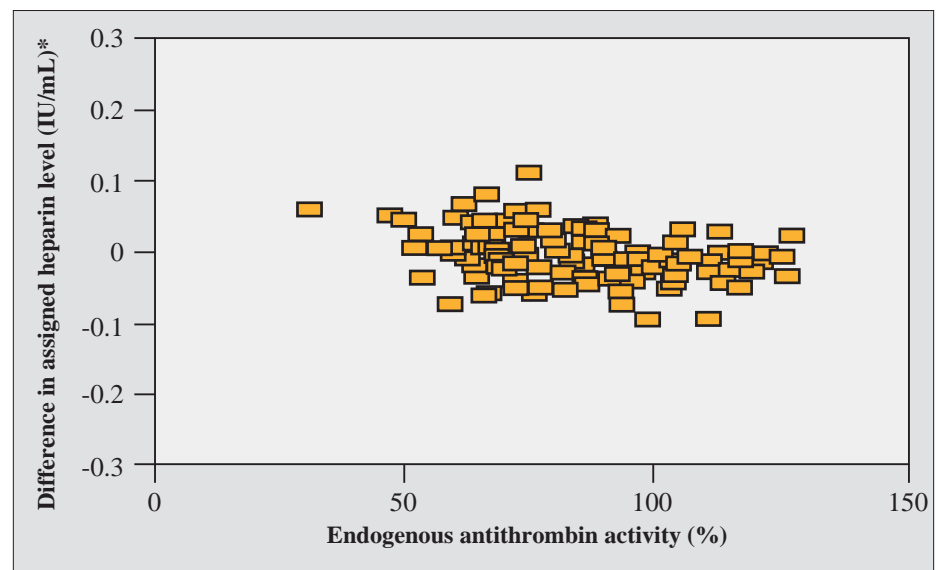


## **A**ddition of exogenous antithrombin not needed

Experiments with heparin spiked samples have shown, that when the antithrombin activity in the plasma is below the normal range, a decreased heparin recovery is obtained. For this reason heparin assays are sometimes run with addition of exogenous antithrombin, to ensure that the correct total heparin concentration is determined.

The Coamatic Heparin assay is insensitive to differences in the endogenous antithrombin activity of samples from patients on heparin therapy. Even though this assay is optimised for use both with and without the addition of exogenous antithrombin, a study of 180 samples from heparinised patients with antithrombin activities varying from 35% to 130%, has shown, that the addition of exogenous antithrombin has no effect on the resulting heparin level (fig).

*Lack of effect on the assigned heparin level from exogenously added antithrombin to plasma from heparinised patients.*



\* The difference in the determined heparin level when Coamatic Heparin is used with or without AT.

## **S**tandards and controls available

Calibration Plasma-LMW Heparin is available for convenient calibration of the assay. The Calibration Plasma kit represents three levels in the range between 0 and 0.8 IU/mL. Each calibrator is calibrated against the international reference standard for LMW heparin.

The Control Plasma-LMW Heparin kit, with two different levels, is available for quality control of the monitoring of LMW heparin.



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## Technical Data

### Reagents

S-2732	Chromogenic substrate
2x15 mg	

Factor Xa	Lyophilized bovine FXa containing dextran sulphate
2x35 nkat	

### Stability of reconstituted reagents

S-2732	3 months at 2-8°C
FXa	3 months at 2-8°C

### Precision

Mean concentration	Within run run CV(%)	Between run CV(%)
0.7 IU/mL UFH	2.8	1.2
0.4 IU/mL UFH	3.4	1.5
0.7 IU/mL LMWH	3.6	2.8
0.4 IU/mL LMWH	2.4	2.3

### Measuring range

Linear standard curve on automated instruments in the range 0-1.0 IU/mL.  
Second order polynomial standard curve in the range 0-2.0 IU/mL.

### Interfering substances

The presence of dextran sulphate reduces the influence from heparin antagonists, e.g. platelet factor 4.

### Determinations per kit

Microplate: 200  
Instrument: 120

### Article number

**82 33 93**

Your Local Distributor is:

DiaPharma Group, Inc.  
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