
Lab Dept: Coagulation

Test Name: HEPARIN ASSAY, UNFRACTIONATED

General Information

Lab Order Codes: HEPU (unfractionated heparin)

Synonyms: Anti-Xa Assay

CPT Codes: 85520 – Heparin assay

Test Includes: Heparin level reported in IU/mL.

Logistics

Test Indications: Measurement of unfractionated heparin levels in patients treated for thrombotic disease. Recommended for use in place of the APTT at Children's Hospitals and Clinics.

Lab Testing Sections: Coagulation

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 hours

Special Instructions: **Do Not** draw through a heparinized line.

Specimen

Specimen Type: Whole blood

Container: Light Blue top (Buffered Na Citrate 3.2%) tube

Draw Volume: 1.8 mL or 2.7 mL blood

Processed Volume: 0.9 mL (Minimum: 0.5 mL) plasma

Collection:

- A clean venipuncture is essential, avoid foaming.
- Entire sample must be collected with a single collection, pooling of sample is unacceptable.
- Capillary collection is unacceptable.
- Patient's with a hematocrit level >55% must have a special tube made to adjust for the hematocrit; contact laboratory for special tube.
- Mix thoroughly by gentle inversion. Deliver immediately to the laboratory at room temperature via courier or pneumatic tube.

Off campus collection:

- Must be tested within 1 hour of collection, if plasma not removed from cells.
- Do not refrigerate.
- If not received in our lab within 30 minutes of collection, sample must be centrifuged and *platelet-poor plasma removed from cells and transferred to an aliquot tube. Plasma must be received in lab within 4 hours of collection or frozen at 20°C and delivered to lab on dry ice within 2 weeks.

***Validation of your lab's centrifuge for platelet poor plasma is required.**

Special Processing:

Lab Staff: Samples should be centrifuged within 1 hour of collection. Remove plasma, store in a plastic screw top vial. Send frozen if testing will not be completed within 4 hours.

Patient Preparation:

None

Sample Rejection:

Improper tube; clotted specimens; under-filled tubes; hemolyzed specimens; mislabeled or unlabeled specimens

Interpretive**Reference Range:**

Normal: <0.10 IU/mL (patient not on heparin)

Therapeutic Range: 0.3 to 0.7 IU/mL

Critical Values:

>1.00 IU/mL

Limitations:

The test cannot distinguish between unfractionated and low molecular weight heparin. The correct assay must be requested for the type of heparin the patient is receiving. The plasma cannot be treated for heparin removal.

Methodology:

Chromogenic Anti-Xa

References:

Rosborough TK (1997) Comparison of Anti-Factor Xa Heparin Activity and Activated Partial Thromboplastin Time in 2773 Plasma Samples from Unfractionated Heparin-Treated Patients, AJCP 108:6, 662-668

Bick RL (1996) Heparin Therapy and Monitoring Guidelines and Practice Parameters for Clinical and Laboratory Approaches, Clin Appl Thrombosis Hemostasis, 2 (Suppl) 512-520

Updates:

9/15/2015: Added Off Campus collection info.

3/10/2015: Special processing update, previously 30 minutes.

7/18/23: Corrected reference range to < 0.10 IU/mL.