Beaumont

Origination:	*5/13/2021*
Effective:	*5/13/2021*
Last Approved:	*5/13/2021*
Last Revised:	*5/13/2021*
Next Review:	*5/13/2023*
Document Contact:	*Tamara Sabih: Medical Technologist Lead*
Area:	*Laboratory-Hematology*
Key Words:	
Applicability:	*Royal Oak*

Fibrin Split Products (Thrombo_Wellco Test)- RO

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

This document is to explain how to preform fibrin split product procedure. Fibrin(ogen) split products are formed by digestion of fibrin(ogen) as a result of activation of the fibrinolytic system. By using a latex suspension sensitized to fibrin split products (FSP), increased levels may be detected. Latex particles, coated with anti D and E, are mixed with dilutions of the patient's serum to semi-quantitate FSP levels. If split products are present, agglutination of the latex particles will take place. The latex is not specific for D and E but will also react with fibrinogen, FSP (X, Y, D and E) and fibrin monomer

II. SPECIMEN COLLECTION ANS HANDLING:

Type	Whole blood collected in a 2 mL special tube provided in Burroughs Wellcome Thrombo-Wellco test kit.
Pediatric Collection	Collect 0.5 mL patient blood into special tubes provided in Burroughs Wellcome Thrombo-Welles test kit.
Additive	Thrombin and fibrinolytic inhibitor. Thrombin ensures complete clotting of fibrinogen. Fibrinolytic inhibitor prevents breakdown of fibrin in vitro.
Amount	2 mL whole blood
Special Handling	Specimen must be spun at room temperature (20-25^{o}C) for 15 minutes (3500 RPM) immediately upon receipt to obtain serum before running test. If tube is overfilled (more than 2 mL whole blood added to FSP collection tube), **spin specimen and transfer approximately 1 mL serum to fresh FSP collection tube**. Incubate this tube at 37^{o}C for 10-15 minutes. Spin and perform test.
Criteria for Unacceptable Specimens	Blood collected without enzyme inhibitor is unsuitable for Fibrin Degradation Products (FDP) tests.

III. Supplies/Equipment

A. Test tubes 10 x 75

B. Droppers, bulbs, sticks and glass slide (Burroughs Wellcome)

C. Pipette - 1.0 ml x 0.1

IV. REAGENTS:

A. **Latex suspension** - 0.75% suspension of polystyrene latex particles coated with sheep anti-FDP globulin, saline buffer containing 0.1% sodium azide, and 0.01% Thiomersal.

B. **Glycine Saline Buffer (pH 8.2)** - buffer containing 0.1% sodium azide.

V. CONTROLS:

A. **Positive Control Serum** - Human serum diluted in glycine saline buffer containing 0.1% sodium azide.

B. **Negative Control Serum** - Human serum diluted in glycine saline buffer containing 0.1% sodium azide. The above reagents and controls are provided in the Thrombo-Wellcotest Kit. Reagents and controls should be stored at 28^{o}C when not in use. Failure of the latex to react correctly with the positive and negative control sera is indicative of deterioration of one or more of the reagents.

VI. PROCEDURE:

A. Make two dilutions of patient serum as follows:

Tube 1	(1:5 dilution): 0.75 ml glycine buffer 5 drops serum
Tube 2	(1:20 dilution): 0.75 ml glycine buffer 1 drop serum

B. On glass slide provided with kit, mark positions 1 and 2 as positive and negative.

C. Add 1 drop of positive control on appropriate circle on slide.

D. Add 1 drop of negative control on appropriate circle on slide.

E. Add 1 drop of patient dilution #1 (1:5) on circle marked #1.

F. Add 1 drop of patient dilution #2 (1:20) on circle marked #2.

G. Place 1 drop latex particles on each circle and mix using stick.

H. Tilt slide gently for 2 minutes while looking for macroscopic agglutination. Evaluate agglutination patterns at 2 minutes. False positives can develop beyond 2 minute rotation.

I. Negative control must not show any agglutination. Positive control agglutination must be very apparent.

J. If neither dilution of patient serum is agglutinated, report as “fibrin split products less than 10 mcg/mL.”

K. If dilution 1 (1:5) is agglutinated and dilution 2 (1:20) is not, report as “fibrin split products greater than 10 mcg/mL but less than 40 mcg/mL.”

L. If both dilutions of patient serum are agglutinated, report as “fibrin split products greater than 40 mcg/mL.”

VII. EXPECTED VALUES:

A. Normal Values:

1. Refer to Coagulation Tests: Reportable Limits and Normal / Therapeutic Values procedure.

B. Reportable Ranges:

1. Refer to Coagulation Tests: Reportable Limits and Normal / Therapeutic Values procedure.

C. Turn Around Time:

1. Stat results available in 30 minutes.
2. Routine results available in 4 hours.

VIII. REFERENCES:

A. Wellcome Research Laboratories, Beckenham England BR3 #BS U.S.A. 1/8276. Printed by the Tabloid Press, Dartford, England, Dec, 1977, 73.12.20.

B. Detection of Fibrin Degradation Products and Fibrinogen, Burroughs Wellcome Co., Research Triangle Park, N.C., Dec, 1977, p 23

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
CP Chief Medical Director	Peter Millward: Chief, Pathology Service Line	5/13/2021
Coagulation Medical Director Designee	Marc Smith: System Med Dir, Coagulation	5/13/2021
Policy and Forms Steering Committee Approval (if needed)	Tamara Sabih: Medical Technologist Lead	5/11/2021
Policy and Forms Steering Committee Approval (if needed)	Gail Juleff: Project Mgr Policy	5/11/2021
System Manager	Rebecca Bacarella: Mgr Laboratory	5/11/2021
	Tamara Sabih: Medical Technologist Lead	5/4/2021

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