Procedure Name: Platelet Mapping Quick Tips
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Original Author:	Effective (adopted) Date:	Supercedes Procedure #
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Z. Boldt	5/3/2016	5/3/2016	0002	Change in procedure

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PLATELET MAPPING

Before you begin: Result "Platelet Mapping" in SOFT with the MA. NOT % inhibition

PLTMP vs Heparinase PLTM:

Whenever Platelet Mapping is ordered on an admitted inpatient, call the floor or check e-record to verify the patient's heparin status. HPLTM requirements are the same as HTEG.

HPLTM:

1) The patient is receiving a heparin drip, or IV was stopped < 6 hours before collection.
2) The patient has received a subcutaneous injection of heparin < 6 hours before collection.
3) The patient is on ECMO (7-1600)

PLTMP:

Oral forms of heparin do not require an HPLTM.

Enoxaparin (Lovenox), Daltaparin (Fragmin), Fondaparineux (Arixtra)

1) Prepare reagents

Remove kit from refrigerator.

Allow 10 min to reach room temp

Tap reagent vials to get contents to bottom

Use water in kit to reconstitute reagents, **DO NOT INVERT** swirl to mix

A-P1 = 50µl ADP-P2 = 100 µl AA-P3 = 100 µl

After water is added to reagents, allow 5 min before use. This is a good time to load cups & pins and order all tests in software.

2) Patient Name: Create Case if necessary

3) Sample Types:

Channel 1: CK if HPLMP use blue Heparinase cup, located in refrigerator in sealed plastic bag.

Channel2: A-Activated

Channel3: ADP-Activated + ADP

Channel 4: AA-Activated + Arachidonic Acid

4) Sample description: same convention as TEG: Collection date, time, order number.

To save time, once this is typed in Channel 1, you can Copy/Paste it into the other channels.

5) Set up and start Channel 1 (TEG)

6) Set up remaining channels:

Add 10µl of **A-P1** to channels 2, 3, and 4 **DO NOT DISCARD** ActivatorF! You may need it for **FF**

Add 10 µl of **ADP** to channel 3

Add 10 µl of **AA** to channel 4

Pipette 360µl whole blood from green top into channel 2. Quickly **mix 3 times** in cup using pipettor.

Avoid excess bubbles. "up, over, F10".

Be sure to mix quickly and start the test as R times for these channels are very short

Repeat for channels 3 and 4

7) Monitor Channels 1 and 2

You may want to set a timer for 15 minutes as a reminder to check the tracings.

A. When running a standard PLTMP, if Channel 1 has not started to clot (no Rtime) at 20 minutes, perform a Heparinase TEG (Let standard TEG run. If it does not look like it will finish by the time the HTEG is done, stop the TEG.) Compare the HTEG Rtime to that of the standard TEG.
   a. If the Rtime decreases to the normal range (4-10min) with Heparinase, change the order to HPLMP, call the floor, and log an SPROB. Use the **HTEG** to create the reports, print 1 copy of the standard TEG for Dr Refaai/ Schmidt.
   b. If the Rtime does not correct with Heparinase, Use the **TEG** to create the reports, print 1 copy of the HTEG for Dr Refaai/ Schmidt.

B. **Watch for Growing MA:**
Once you have started all channels, DO NOT DISCARD Activator. Monitor the Activator (A-P1) channel. It should resemble Figure 2 (top and bottom lines are parallel). If the tracing looks like Figure 1, MA_A is greater than 25mm **AND** has not finalized within 15 minutes, see the **Functional Fibrinogen** section.
Occasionally you will get a tracing that looks like figure 1 but, the MA finalizes before platelet activation (secondary clot growth) begins. In this case it is not necessary to use FF as it will not change the result.

Figure 1

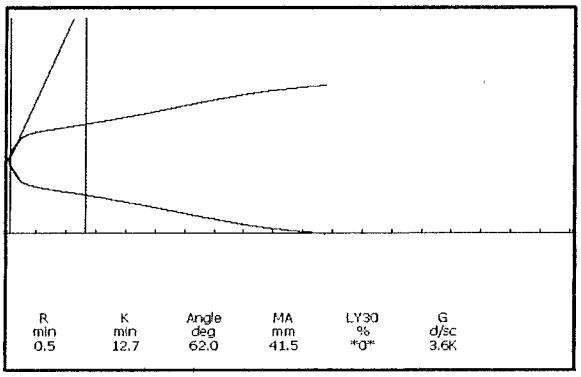
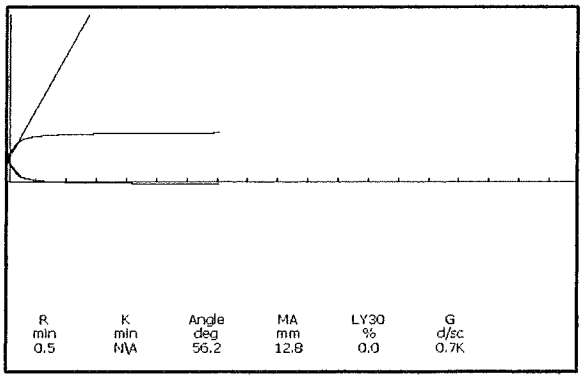


Figure 2



8) Terminate analysis: Channel 1 is the only channel that must run to completion. Channels 2, 3, and 4 can be stopped once MA is reached.

9) Print reports:

If Functional Fibrinogen used, refer to that section for printing reports instructions

% inhibition ADP: click [Multi], CK(H), A, ADP [Done]

The report will appear with the selected tracings superimposed and the %inhibition displayed. Press [Report], [Continue] [Print]

% inhibition AA: click [Multi], select CK(H), A, AA [Done]

The report will appear with the selected tracings superimposed and the %inhibition displayed. Press [Report], [Continue] [Print]

10) Report results:

Result "Platelet Mapping" in SOFT with the MA. NOT % inhibition

The results from Channel 1 (R, K, Angle, MA, LY30, CI) as well as the MA from ADP and AA are reported in soft externally. The MA from the Activator F is reported internally.

Enter the results and save but do not verify. Have a second technologist review and verify the results in soft. Print an instant report, staple it to the tracings, and place in the "TEG reports" bin for interpretation.

Functional Fibrinogen:

If your ActivatorF tracing has a Growing MA (greater than 25mm **AND** has not finalized after 15 minutes), re-run using Functional Fibrinogen. It is similar to using a vial of Kaolin.

1) Take out 1 vial of Functional Fibrinogen from refrigerator
2)Order **A-Activated** in the TEG software. Under sample description, select w/ Functional Fibrinogen
3) Add 10 µl ActivatorF to cup
4) to FF vial, add 500 µl of Heparinized blood (transfer pipette, fill to line is acceptable). Invert 5 times to mix.
5) transfer 360 µl from vial to the cup, mix 3 times with pipette, "up, over, F10".
This should inhibit all platelet function and give a true representation of the fibrin contribution to clot strength.

A total of 4 reports will be generated:

1) CK(H), A, ADP
2) CK(H), A, AA
3) CK(H), FF, ADP
4) CK(H), FF, AA

In SOFT, as the "Platelet Mapping Activator," enter the FF value and add the comment "used Functional Fibrinogen".