# EXACTECHBIOLOGICS

PreparationTechnique



**Platelet Concentrating System** 



# **PREPARATION TECHNIQUE**

# PREPARATION

- Step 1: Aseptically transfer the PRP aspirating kit and applicator kit into the sterile field. If possible, this should be completed before the patient is in the room.
- Step 2: Transfer 5mL of calcified thrombin (5mL CaCl<sup>2</sup> +5000 units of thrombin) into the sterile field.

## BLOOD DRAW

- Step 1: Draw 6mL of anticoagulant into 60mL syringe.
- Step 2: Attach and prime the apheresis needle with ACD-A.
- Step 3: Draw 54mL of blood, filling the syringe to 60mL (54mL of blood and 6mL ACD-A). Gently mix the blood and anticoagulant.

#### PLATELET RICH PLASMA (PRP) PROCESSING

- Step 1: Transfer the 60mL of blood and ACD-A into the blood separating tube. Fill the counterbalance with equivalent volume of water or saline (*Figures A, B*).
- Step 2: Place both tubes in the centrifuge buckets at opposite ends of the rotor.
- Step 3a: Drucker Centrifuge: Centrifuge at 2400 rpm, 12 minutes, 0 brake (*Figure A*).
- Step 3b: Eppendorf Centrifuge: Centrifuge at 3600 rpm, 10 minutes, 0 brake (*Figure B*).
- Step 4: Once the centrifuge has stopped, mount the blood separator tube on the IV pole (*Figure C*).

## PRP AND PLATELET POOR PLASMA (PPP) SYRINGE ASPIRATION IN THE STERILE FIELD

- Step 1: Connect one end of the extension line to the three-way valve assembly (the other two ends are connected to a 60mL syringe and 12mL syringe) (*Figure D*).
- Step 2: Connect the other end of the extension line from the sterile field to the blood separating tube.
- Step 3: With the stopcock valve closed to the 12mL syringe, SLOWLY draw plasma into the 60mL syringe. This will draw down the aspiration disc inside the blood tube. Slow down when the aspiration disc meets the plasma/RBC interface. A red tint will enter the extension line. Stop when the red tint reaches the blue marker (*Figure E*).

## PRP SYRINGE

- Step 4: With the stopcock valve closed to the 60mL syringe, SLOWLY draw 6mL of PRP into the 12mL syringe.
  - *Note:* If 10mL of PRP is required, add an additional 4mL of PPP into the 12mL syringe for a total of 10mL (Figure F).

# **5** PPP SYRINGE

- Step 5: Remove the PRP syringe and replace with an empty 12mL syringe.
- **Step 6**: With the stopcock valve closed to the extension line, aspirate 10mL of plasma into the syringe *(Figure G)*. This is the PPP syringe.

#### Figure A



# Figure C









#### Figure E







Figure G



# Figure B

#### **PRP APPLICATOR ASSEMBLY**

Step 1: Aspirate 0.6mL of the calcified thrombin into the 1cc syringe.

*Note:* For 10mL of PRP, aspirate 1mL of the calcified thrombin into the 1cc syringe.

**Step 2**: Mount the dispensing tips to the end of the PRP syringe and thrombin syringe. Attach the assembly into the holder (*Figure H*).

# **PPP APPLICATOR ASSEMBLY**

Step 1: Aspirate 1mL of the calcified thrombin into the other 1cc syringe.

**Step 2**: Mount the dispensing tips to the end of the PPP syringe and thrombin syringe. Attach the assembly into the holder (*Figure I*).

Figure H



Figure I



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Accelerate Concentrating System is designed to be used for the safe and rapid preparation of autologous platelet rich plasma (PRP) from a small sample of blood at the patient's point of care. The PRP can be mixed with autograft and allograft bone prior to application to an orthopedic surgical site as deemed necessary by the clinical use requirements.

Please be advised the Accelerate Concentrating System distributed by Exactech is not cleared for specific indications or treatments.

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