

# Vet-Stem GenesisCS

## Component Concentrating System - Veterinary

### INSTRUCTION MANUAL

- Before using this system, be sure to read and understand instructions provided in this manual.
- All products provided are sterilized and packaged by the manufacturer. All items are sterile if the package is undamaged or unopened
- For single use only. Do not re-sterilize. All items contained in this kit must be disposed of according to hospital policy for biological waste, use universal precautions. Must be stored in a dry place. Protect from vapors and extreme heat.
- This device is designed to be used in a GenesisCS centrifuge machine which is designed to spin at 720g (centrifugal force), 2400RPM for 15 minutes. To calculate RPMs for other centrifuges please measure the radius of the rotor in centimeters and go <http://www.vet-stem.com/prp.php> and use the RPM calculator. During centrifugation, this device must be counterbalanced with two equally weighted GenesisCS 30 ml Separator Tubes at all times during centrifugation. If the device is not properly counterbalanced the blood will not separate during centrifugation and vibrations can cause functional errors in the centrifuge machine. For additional questions please contact Vet-Stem.
- This device is designed to separate anticoagulated whole blood. Fifty two (52) ml of whole blood must be anticoagulated with 8 ml of **ACD or CPD anticoagulant** before introducing into the separator device (**Do not use heparin**). Blood not properly anticoagulated will clot during centrifugation resulting in premature activation.
- **Indication for use:** The GenesisCS Component 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.
- **Caution:** Federal (U.S.A.) law restricts this device for sale by, or on the order of a licensed veterinarian. Always follow aseptic technique whenever entering a sterile container. Aseptic technique, proper site preparation, and continued protection of the venipuncture site are essential.

### PROPER BALANCING OF SEPARATORS

1. To counter balance, separator tubes must be placed opposite each other in the centrifuge rotor.
2. All separators must contain the same volume during centrifugation.
3. Unbalanced separators will cause strong vibrations during centrifugation.

### IF VIGOROUS VIBRATION OCCURS

1. Quickly stop the centrifuge.
2. Remove the components and check each separator for equal volume. Make sure separators are placed at opposite ends of each other and that unused buckets are removed.

### PREPARATION OF THE VENIPUNCTURE SITE

The veterinary health care professional responsible for blood collection should be trained in the practice of venipuncture and the inherent risks. Aseptic technique, proper skin preparation and continued protection of the venipuncture site are essential. **It is recommended that the time of blood collection to the time of injection of autologous PRP back into the horse should not exceed 4 hours.**

## BLOOD DRAW STEPS

### STEP 1:

FILL THE 60ML SYRINGE WITH EXACTLY 8ML OF ACD OR CPD (AN ANTICOAGULANT FOR AUTOLOGOUS PRP SYSTEMS)



### STEP 2:

ATTACH AND PRIME THE NEEDLE EXTENSION SET WITH ACD OR CPD.



### STEP 3:

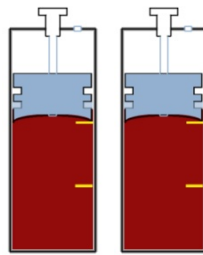
DRAW 52 ML OF BLOOD, FILLING THE SYRINGE TO 60 ML (52ML BLOOD, 8ML ACD OR CPD). GENTLY MIX BLOOD WITH ANTICOAGULANT



## BLOOD PROCESSING STEPS

### STEP 1:

FILL EACH SEPARATOR WITH 30ML OF BLOOD



### STEP 2:

PLACE BOTH SEPARATORS IN THE CENTRIFUGE BUCKETS, AT OPPOSITE ENDS OF THE ROTOR.



### STEP 3:

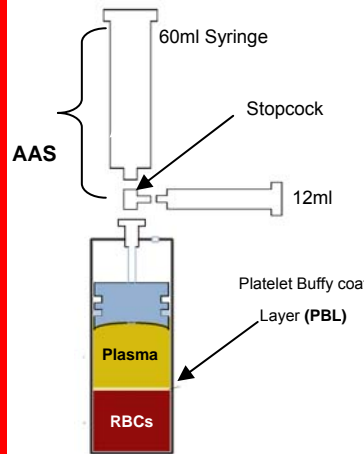
SPIN TUBES FOR 15 MINUTES AT 720 XG

FOR DETERMINATION OF G'S FOR YOUR CENTRIFUGE MEASURE THE RADIUS OF THE ROTOR IN CENTIMETERS AND VISIT [HTTP://WWW.VET-STEM.COM/PRP.PHP](http://www.vet-stem.com/prp.php) TO CALCULATE RPM'S



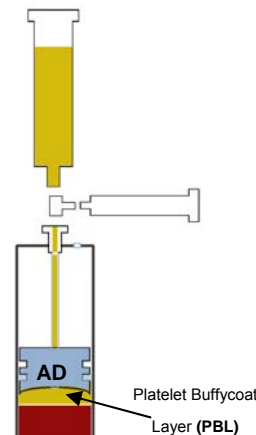
### STEP 4:

ONCE CENTRIFUGATION HAS STOPPED, REMOVE THE SEPARATOR WITH BLOOD AND ATTACH THE ASPIRATION ASSEMBLY SET (AAS)



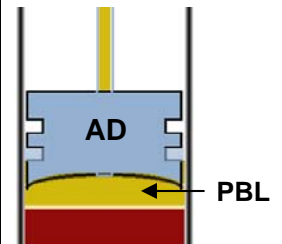
### STEP 5:

WITH THE STOPCOCK OPEN TO THE 60ML SYRINGE, BEGIN SLOWLY DRAWING PLASMA INTO THE 60ML SYRINGE. THIS WILL DRAW DOWN THE CONCAVE ASPIRATION DISC (AD) INSIDE THE SEPARATOR.



### STEP 6:

ASPIRATE PLASMA UNTIL THE BOTTOM OF THE CONCAVE ASPIRATION DISC (AD) IS 1/4" ABOVE THE RBCs, ONCE THIS OCCURS, GO TO THE NEXT STEP. **NOTE: DO NOT ASPIRATE ANY OF THE PBL INTO THE 60ML SYRINGE**



### STEP 7:

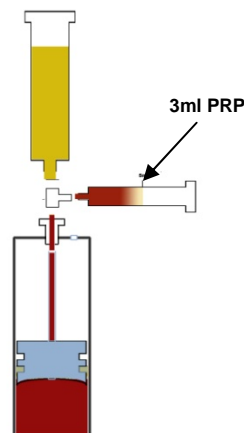
OPEN THE STOPCOCK TO THE 12ML SYRINGE



### STEP 8:

DRAW 3ML OF PRP INTO THE 12ML SYRINGE

NOTE: A SMALL VOLUME OF RBCs WILL BE ASPIRATED – THIS WILL MAKE THE PRP APPEAR RED



### STEP 9:

**SHUT STOPCOCK TO ALL DIRECTIONS. REMOVE USED SEPARATOR TUBE**

**REPEAT STEPS 4-8 FOR EACH SEPARATOR FILLED WITH BLOOD**

**EACH SEPARATOR PROVIDES 3ML OF CONCENTRATED PLATELET RICH PLASMA**

**THIS KIT CONTAINS 2 SEPARATORS PROVIDING A TOTAL OF 6ML OF CONCENTRATED PLATELET RICH PLASMA**