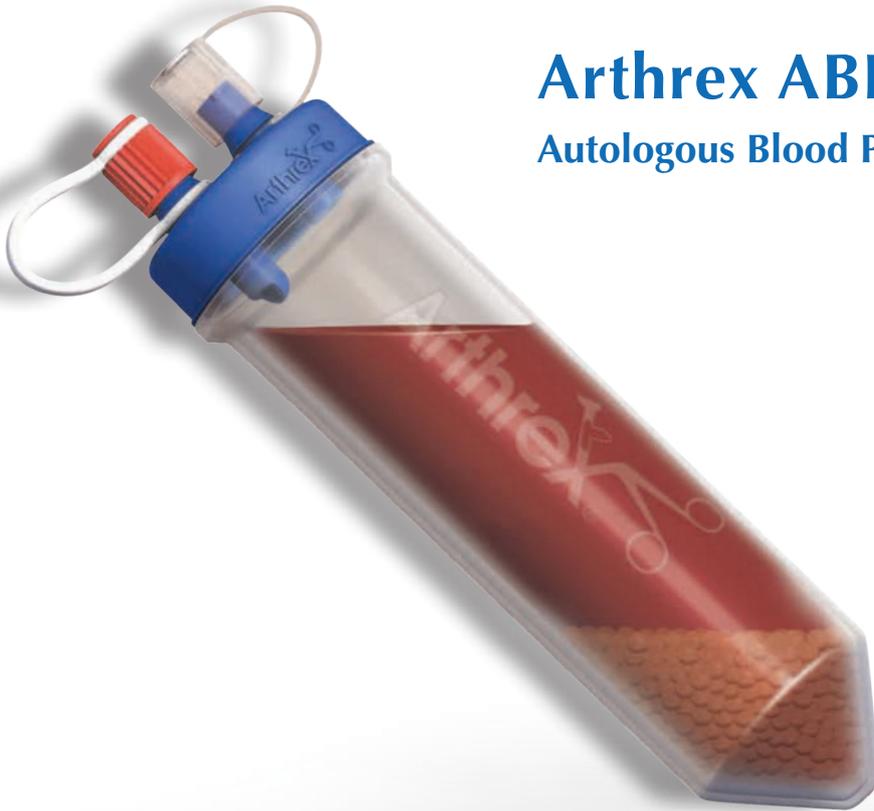


Instructions For Use

Arthrex ABPS

Autologous Blood Processing System



Arthrex[®]
Vet Systems



Preparation of Autologous Blood Serum

Defects in articular cartilage can induce osteoarthritis by causing molecular changes in the synovial fluid. One of the major inducers of osteoarthritis is the general inflammatory cytokine Interleukin-1 (IL-1) which plays a key role in accelerating tissue destruction and the repair mechanisms.

In a healthy joint, IL-1 and Interleukin-1 receptor antagonist (IL-1Ra) are in balanced concentrations. In cases of osteoarthritis, there is not sufficient IL-1Ra produced to block the destructive effects of the increased IL-1. The result is inflammation, joint pain, and finally cartilage destruction.

The following technique explains how to process autologous serum containing increased levels of anabolic and inhibitory cytokines for use at the point of care.

Technique



1

After routine preparation of the jugular vein, put on sterile gloves. Hook up the enclosed butterfly needle of the kit to the 60 mL syringe and use the butterfly needle to puncture the jugular vein.



4

Place the Arthrex ABPS device vertically in an incubator within two hours of the blood draw. Incubate at 37°C for approximately 16-22 hours. Do not exceed 24 hours.

Products

Arthrex ABPS **VAR-1011**
Kit contains one IRAP II device with dual ports, one 60 mL Syringe and one Butterfly Needle

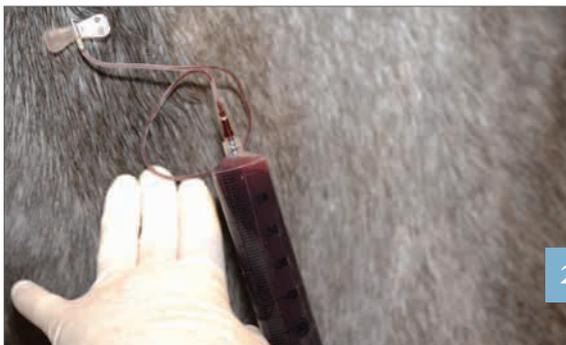
ABPS Counterweight for centrifugation **VAR-1012-1**

Rotor for Centrifuge **VAR-1021**

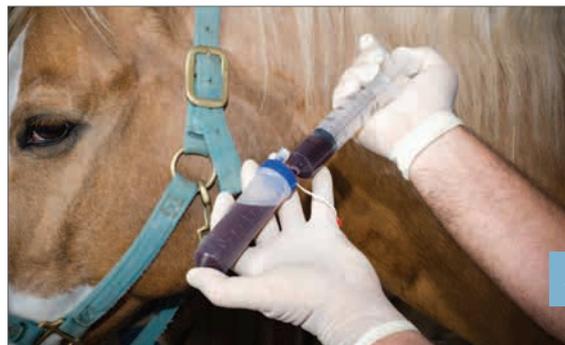
Incubator **VAR-1040**

Centrifuge **VABS-10019**





Slowly draw 50 mL of blood into the syringe. Remove the butterfly needle from the jugular and detach from the syringe.



Attach the syringe with blood to the luer and **slowly** inject the blood into the Arthrex ABPS device while holding the devices at about a 60° angle.



Place the incubated Arthrex ABPS device into the centrifuge, with the red cap towards the top, and spin at 4000 rpm for 10 minutes. The centrifuge should contain proper counterweight, if appropriate.



Use an alcohol swab to clean the top of the clear cap. Slowly puncture the vented clear cap and slowly draw the serum into a 20 mL syringe using a spinal needle. Be careful not to pull up any red blood cells.



Attach a sterile .22 μm millipore filter and a female-female luer lock adapter between the 20 mL syringe containing the serum and an empty sterile 6 mL syringe. Transfer 4 mL of serum to the 6 mL syringe, detach the 6 mL syringe and cap. Repeat until all serum has been transferred through the sterile filter into the 6 mL syringes.

Individual doses may be used immediately or frozen at -18° C for up to 12 months.

Excess blood should be disposed of and the disposal documented according to applicable regulations. When using at site of treatment, a sterile filter should be placed on the syringe containing the autologous serum, prior to use.

References

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3. J. Nixon, L. Haupt, D. Frisbie, S. Morisset, C. W. McIlwraith, P. Robbins, S. Ghivizzani, A. Evans, *Enhanced Cartilage Repair by Gene-Mediated Combination Insulin-Like Growth Factor-1/Interleukin-1 Receptor Antagonist Therapy*. Proc Orthop Res Soc, 2002; Poster; 276.
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6. D. Frisbie, C. Kawcak, N. Werpy, R. Park, C.W. McIlwraith, *Clinical, Biochemical, and Histologic Effects of Intra-articular Administration of Autologous Conditioned Serum in Horses with Experimentally Induced Osteoarthritis*. AJVR, Vol. 68, No 3, March 2007; 290-296.



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