ACP Max™ Syringe Systems

Canine White Paper

Mechanism of Action

Outside the bloodstream, platelets become activated and release proliferative and morphogenic proteins. These proteins appear to work synergistically to invoke the following benefits[1-3]:

- Induce proliferation and differentiation of various cell types (eg, progenitor cells, osteoblasts, epidermal cells)[1,3]
- Enhance/modulate the production of collagen, proteoglycans, and tissue inhibitor of metalloproteinases (TIMP)[2,3]
- Stimulate angiogenesis and chemotaxis[1,3]

To evaluate the differences between ACP Max platelet-rich plasma (PRP) and whole blood, PRP was prepared from the venous blood of 4 healthy canine donors, and the concentration of platelets, red blood cells (RBCs), and white blood cells (WBCs) was measured with a standard complete blood cell count. It was found that ACP Max PRP contained above baseline platelet concentrations compared to whole blood, with an average of approximately 5 times more platelets in PRP produced from a 90 mL processing volume.[4] For 30 mL and 90 mL processing volumes, respectively, there was an average reduction of 97% and 75% WBCs (specifically 99.6% and 98.6% reduction of neutrophils) and 99.9% and 99.6% RBCs.

Figure 1. Platelet Concentration

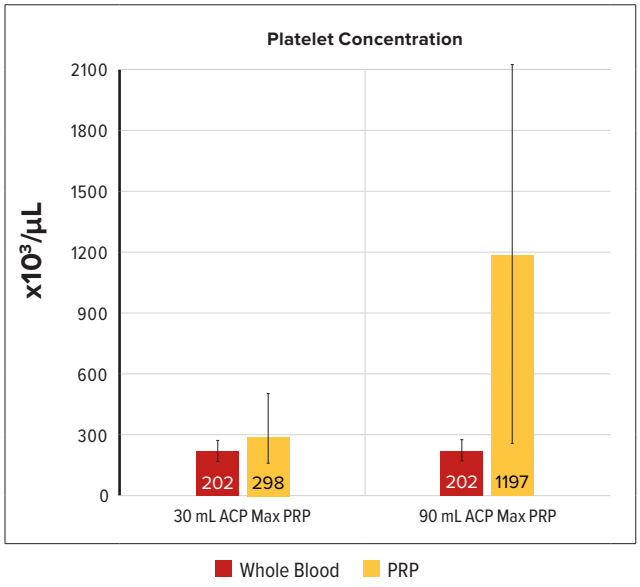


Figure 2. WBC Concentration

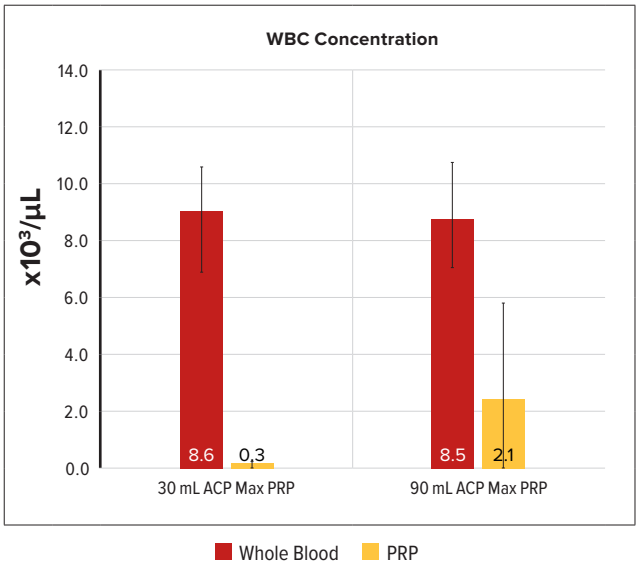
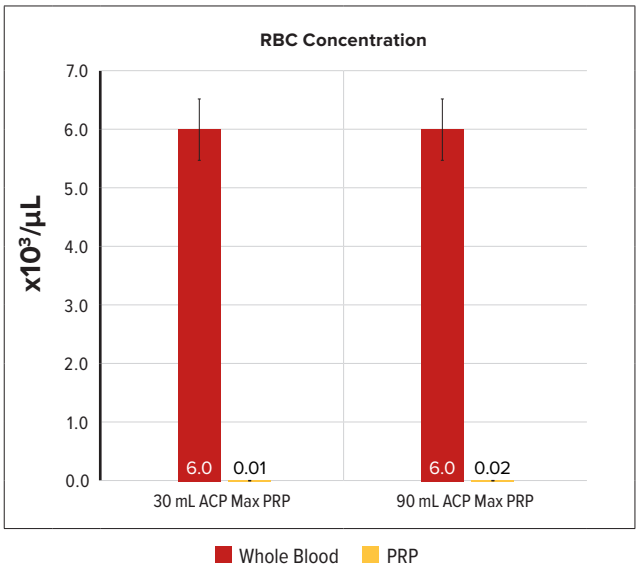


Figure 3. RBC Concentration



References

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