

# ANOTHER *BLOODY* NEWSLETTER!

## February 2006

### **ABL 805 Blood Gas results:**

Reference intervals for pH, PO<sub>2</sub>, and PCO<sub>2</sub> were derived from the ABL 505, and therefore may not be applicable for the ABL 805. The lactate intervals for dogs, horses, and cattle are published values (Kaneko). Lactate intervals for cats are not currently available. Other data are from Hitachi 917/ABL 805 correlations.



All tubes with additives need to be inverted to mix the additive with the blood. Tubes containing an anticoagulant should be inverted 8-10 times to prevent clotting. Citrate tubes should be inverted 3-4 times. Be sure that tubes are not being shaken vigorously, as this can lead to a hemolyzed sample.

All blood collection tubes need to be filled to the correct volume. This will ensure the proper amount of blood for the amount of additive in the tube. Expired tubes should not be used, as they may have a decreased vacuum or changes in any additives.

Serum samples need to clot completely prior to centrifugation and processing, and may take up to 45-60 minutes, particularly in cattle. Blood from patients who are receiving anticoagulation therapy may take longer to clot. Tubes should be allowed to clot at room temperature, upright in a test tube rack. Spinning the tube too soon may result in a gelatinous and/or fibrinous serum sample that will require respinning. Blood collected with anticoagulant does not require clotting prior to centrifugation, resulting in a quicker turn-around-time for test results. Whole blood samples should be centrifuged within two hours after collection. Once the serum has been removed, the sample will be stable at room temperature for 8 hours, and up to 48 hours at 2-4 degrees C. For most tests after 48 hours, the serum specimen should be frozen at -20° C in an aliquot tube. (Note: some analytes, as bilirubin, are photo-sensitive, and need to be protected from light.)

**It is important to remember that a better quality sample during the preanalytical phase of blood collection will yield a better test result.**

**Reference:** *Preanalytical Variables in the Chemistry Laboratory*, Lab Notes, Vol.15, No.1, 2005.

Respectfully submitted by Cherie Heger, MT (ASCP).

### **Coagulation: APTT reference intervals (in**

seconds) are: Dog: 8-11.5 (N = 82)

Cat: 9-14 (N = 38)

Horse: 29-43 (N = 31)

Samples from normal cats and horses are still desired to further establish PT and APTT intervals.

### **ASAP vs. STAT requests:**

*As Soon as Possible (ASAP)* requests will be run as quickly as possible, based on current workload. These should be reserved for times when treatment depends on results (as chemo, surgery). *STAT* requests indicate the need for other work to stop so the *STAT* work can be completed and should be reserved for *life and death* situations only.

### **Continuing Education:**

#### **Blood specimen drawing and handling:**

When drawing blood, avoid probing to find the vein and achieve blood flow. Excessive probing and/or “fishing” to find a vein can result in a poor quality sample, including hemolysis. Hemolysis can result in the possible elevation of such analytes as potassium, iron, and magnesium.

#### **The following order is recommended...**

- 1). Sodium Citrate (Blue top tube)
- 2). Serum tube (Red top tube)
- 3). Heparin Tube (Green top tube)
- 4). EDTA tube (Lavender top tube))

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