

Blood Sample Handling Best Practices



Quality of sample analysed = Quality of result

Avoid vein collapse when drawing samples



 Minimise suction on the syringe, and do not draw back too quickly.

Prevent haemolysis



- Use the largest vein and needle appropriate for blood collection.
- Never use any needle smaller than a 23 gauge size.



- Use minimal alcohol on fur/skin.
- Remove the needle from the syringe before dispensing into the blood tube, unless using a closed vacuum blood collection system.

Ensure the correct ratio of anticoagulant to blood



- Always use the smallest collection tube needed.
- Fill lithium heparin and EDTA tubes to minimum
 fill line



• Fill sodium citrate tubes exactly to the fill line.

Prevent unwanted clotting



 Do not hold off the vein for more than a few seconds before venipuncture.



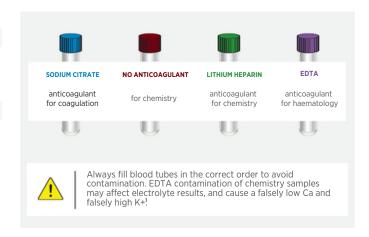
 For feline samples collected from the medial saphenous vein: a vacuum blood collection system instead of a syringe is recommended.

Do not allow sample to degrade



Run the sample as soon as possible after drawing.

Collection Tubes & Fill Order



Tube Handling

Chemistry 2,4

Whole blood samples must be inverted 8-10 times after collection and re-inverted just prior to use.

Haematology 3,4

Samples must be inverted 10-15 times after collection and re-inverted just prior to use.

Never shake blood sample tubes.

1.3 mL and smaller tubes may need additional inversions for proper mixing.

Do not rely on a rocker to mix blood samples properly; rockers do not take the place of proper tube inversion.

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Sample Quality

NORMAL plasma and serum samples are straw colored, and do not have a yellow, red, or pink tinge.

HAEMOLYSED plasma and serum samples have a pink/red tint due to broken red blood cells.

<u>Avoid haemolysis</u> by using proper sample collection and handling techniques.¹

LIPAEMIC plasma and serum samples have a milky appearance due to a high concentration of fat in the blood.

<u>Avoid lipaemia</u> by using a fasted patient sample whenever possible. Remind clients to refrain from feeding their pets prior to their appointment.

ICTERIC plasma and serum samples have a yellow color due to a disease or condition that causes excess bilirubin in the blood.

CLOTTED samples may have visible red clots that stick to wooden applicator sticks when swirled in a sample. Traumatic or delayed blood collection can lead to micro and /or macro clots.¹

Avoid clotted samples by inverting blood tube appropriately immediately after filling. Re- draw any clotted haematology samples.

NOTE: Never run a clotted sample for analysis on the HM5.

Sample Storage^{5,6}



Chemistry

Lithium Heparin whole blood samples at room temperature+ must be run within 1 hour,8 or separated to serum* or plasma* and run as soon as possible? Serum and plasma samples may be stored refrigerated ++ for up to 48 hours.8



Haematology 3

EDTA whole blood samples must be run within 1 hour at room temperature; and may be stored refrigerated** for up to 12 hours. Blood should return to room temperature prior to running on the HM5.

- * Stored plasma and serum samples must be separated and kept in a stoppered test tube containing no additive.
- + Room Temperature (20-25 °C)
- ++ Refrigerated Temperature (2-8 °C)



