

CROSSMATCH INTERPRETATION: Interpret reaction in Clear Top Reaction (R) Gel Tube (yellow-bordered label) using the Crossmatch Photo Identifier provided. Record results using report card provided.

POSITIVE CROSSMATCH indicates the Recipient is at risk for demonstrating a transfusion reaction.
DO NOT TRANSFUSE USING THIS DONOR

NEGATIVE CROSSMATCH indicates the Recipient is likely NOT at risk for demonstrating a transfusion reaction from the Donor.

Test results might be affected by the age of the cells used. Stored blood might exhibit a weaker reaction than that shown in the Photo Identifier. Weaker reactions may result if the Recipient has a low PCV.

IMPORTANT NOTES: CROSSMATCHING IS DONE IN ADDITION TO, AND DOES NOT REPLACE, BLOOD TYPING.

Transfusions involving incompatible BLOOD TYPES will result in the activation of alloantibodies which may cause life-threatening reactions, or the production of antibodies which may cause serious complications in subsequent transfusions. In addition, the lifespan of incompatible RBCs will be shortened, increasing the need for further transfusions.

This test is not recommended if Oxyglobin® is in recipient blood, or in the event of severe hemolysis.

Storage: Shelf-life: 24 months. Store upright at room temperature until expiration date: DO NOT FREEZE.

Disposal: Dispose of all biological materials, pipettes and tubes in a biohazard container.

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Oxyglobin is a registered trademark of OPK Biotech LLC

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RapidVet[®]-H

Companion Animal Crossmatch Test

MINOR (Donor Serum or Plasma / Recipient Blood)

For use on either canine or feline species

Description and Intended Use: Crossmatch is an essential procedure to be considered before most transfusions and in addition to blood typing. A crossmatch reveals serological incompatibilities between a blood donor and recipient that will not be evident from blood typing alone.

RapidVet-H Minor Crossmatch is performed using donor serum or plasma and recipient red blood cells. The test will alert the veterinarian to the existence of antigens on recipient red blood cells that correspond to antibodies, whether acquired or naturally occurring, present in the donor serum or plasma. Though generally of lesser importance, the minor crossmatch is especially important in species with naturally occurring alloantibodies, such as cats, or in the event a donor animal has been previously transfused.

The AB blood group system includes blood types A, B and AB. Type A and Type B cats have naturally occurring antibodies to antigens not on their red cells. Thus, cats with Type A blood have antibodies to Type B antigens and cats with Type B blood have antibodies to Type A antigens. In this species, major crossmatch should be performed prior to every transfusion and before breeding decisions are made. But not all incompatibilities become evident in a major crossmatch. The discovery of new feline red cell antigens including *Mik* and others increases the importance of also performing a minor crossmatch before transfusion decisions are made.

Mik-negative cats (those without *Mik* antigens on their red cells) have anti-*Mik* alloantibodies capable of causing significant transfusion reactions, even those whose AB blood groups are compatible. Incompatibility between a *Mik*-positive donor and a *Mik*-negative recipient will be evident in a major crossmatch. The minor crossmatch is a way to detect incompatibility between a *Mik*-positive recipient and a donor that is *Mik*-negative. Since whole blood is often used to transfuse cats, incompatibilities in the minor crossmatch might be clinically significant.

Kit Contents: Instructions; Procedure Diagram; Photo Identifier; Report Cards; 3 Test Stands each containing 7 tubes; and 3 pipette bags each containing 10 pipettes.

Donor Sample: 1.0 ml serum or plasma obtained by centrifuging 2.0 ml whole blood.

Recipient Sample: **0.1 ml** (100 μ l) EDTA anticoagulated whole blood.

Test Setup

For use with all tests, a Procedure Diagram and Photo Identifier are included in each kit box

- A. Remove: 1 test stand containing 7 tubes, 1 pipette bag and 1 report card.
- B. Write Recipient name/ID on all seven (7) tubes.
- C. Write Donor name/ID on Yellow Top Reaction (**R**) Tube and Clear Top Reaction (**R**) Gel Tube (yellow-bordered label)
- D. Insert Blue Top Blood Prep Tube upright into well provided in test stand.

Test Procedure [Follow bracketed numbers on diagram]
Use a clean pipette for every step to prevent contamination.

- [1] **PIPETTE** 2 drops (100 μ l) Recipient Sample to Blue Top Blood Prep Tube; cap tightly and gently invert several times to mix thoroughly. Place upright in test stand.
- [2] **PIPETTE** 4 drops (200 μ l) Donor Serum or Plasma to Yellow Top Reaction (**R**) Tube.

From Blue Top Blood Prep Tube, using a clean pipette for each transfer:

- [3] **TRANSFER** 2 drops (100 μ l) to Yellow Top Reaction (**R**) Tube. Replace cap, tighten and gently invert several times to mix thoroughly.
- [4] **TRANSFER** 2 drops (100 μ l) to Green Top Negative (-) Control Tube. Replace cap, tighten and gently invert several times to mix thoroughly.
- [5] **TRANSFER** 2 drops (100 μ l) to Red Top Positive (+) Control Tube. Replace cap, tighten and gently invert several times to mix thoroughly.
- [6] **INCUBATE:** Let all tubes stand for five (5) minutes at room temperature (20-25°C / 68-77°F).

- [7] **TRANSFER** 1 drop (50 µl) from Yellow Top Reaction (**R**) Tube to Clear Top Reaction (**R**) Gel Tube (yellow-bordered label). Cap tightly.
- [8] **TRANSFER** 1 drop (50 µl) from Green Top Negative (-) Control Tube to Clear Top Negative (-) Control Gel Tube (green-bordered label). Cap tightly.
- [9] **TRANSFER** 1 drop (50 µl) from Red Top Positive (+) Control Tube to Clear Top Positive (+) Control Gel Tube (red-bordered label). Cap tightly.
- [10] **PLACE** Gel Tubes in centrifuge and spin according to chart below.

Centrifuge**	Speed (rpm)	Time
Iris Processing Stat Spin™ MP	9800 (Urine setting)	90 seconds (45 secs run twice)
Clay Adams TRIAC™	3800 (Serum setting)	7 minutes
Clay Adams Analytical (0179)	3200	5 minutes
Adams™ Compact II	3200	7 minutes
Clay Adams READACRIT™	4000	5 minutes

****If you do not have one of the listed centrifuges, refer to rapidvet.com under “Downloads” tab for a more complete centrifuge list; or call toll-free in US and Canada: (800) 567- 4367; or (908) 782-3353**

Interpreting and Reporting Results

Use the Crossmatch Photo Identifier provided to interpret results in Clear Top Negative (-) and Positive (+) Control Gel Tubes.

NEGATIVE CONTROL: Clear Top Negative (-) Control Gel Tube (green-bordered label) should demonstrate a collection of red blood cells at the **bottom** of the gel column.

POSITIVE CONTROL: Clear Top Positive (+) Control Gel Tube (red-bordered label) should demonstrate an agglutination of red blood cells at the top of the gel column or a dispersion of red cells mid matrix and above.

IMPORTANT: If controls do not react as stated above, DO NOT proceed with the interpretation of test.