

**CROSSMATCH INTERPRETATION:** Interpret Clear Top Reaction (**R**) Gel Tube (yellow 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. EDTA blood and donor serum or plasma samples may be tested up to 3 days post collection if stored at 2-8°C.

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

**Always determine both donor and recipient blood types using RapidVet-H Blood Typing Kit before performing a crossmatch.**

**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 haemolysis.**

**Storage:** Store upright at room temperature (20-25°C) until date of expiry. DO NOT FREEZE.

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

For assistance please contact:

**Woodley Equipment Company Ltd.**

Old Station Park Buildings, St. John Street, Horwich, Bolton, BL6 7NY

Tel: +44 (0) 1204 669033 Fax: +44 (0) 1204 669034

Email: [sales@woodleyequipment.com](mailto:sales@woodleyequipment.com) [www.woodleyequipment.com](http://www.woodleyequipment.com)

RapidVet is a registered trademark of **dms**laboratories, inc.

Oxyglobin is a registered trademark of OPK Biotech LLC

Rev. 03/08/2017HCMIN03\_UK

# **RapidVet<sup>®</sup>-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 Racks 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 µl) 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 rack 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 Yellow labeled Clear Top Reaction (**R**) Gel Tube.
- D. Insert Blue Top Blood Prep Tube upright into well provided in test rack.

**Test Procedure** [Follow bracketed numbers on Procedure Diagram]

*Use a clean pipette for every step to prevent contamination.*

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

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

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

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

Centrifuge*	Speed Setting	Spin Time
Clinispin Micro	Highest setting	2½ minutes
842VET	Set to 8000 rpm	1 minute
642E	642E is single speed	4 minutes
Centurion 1010	Set to 8000 rpm	1 minute
Clinispin 1000HS	Set to 8000 rpm	1 minute
Statspin	Urine setting	90 seconds (2 runs)
Hawksley	Hawksley is single speed	35 seconds

**\*If you do not have one of the listed centrifuges, please contact Woodley Equipment Company Ltd Technical Support: +44 (0) 1204 669033**

### 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 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 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.**