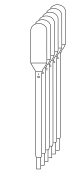
EmMa.Test
Major + Minor XM Feline

QR CODE : Movie Procedure

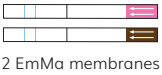
PROCEDURE FOR FELINE MAJOR + MINOR CROSSMATCH

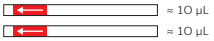
Material provided

30 min


6 pipettes


2 large tubes for plasma


2 EmMa membranes



2 blood collector strips


1 blue top buffer

2 small tubes


2 wash buffers


1 yellow top buffer

MAJOR = Donor's Red Blood Cells (RBCs) + Recipient's Plasma
MINOR = Recipient's RBCs + Donor's Plasma

N°1 : PREPARATION OF BLOOD SAMPLES AND TRAY

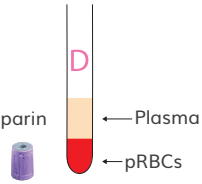
1

Centrifuge DONOR and RECIPIENT blood tubes **5 minutes at 1000g** to obtain packed red blood cells (pRBCs) and plasma[1].

DONOR

Whole blood
- EDTA
- CPD
- ACD

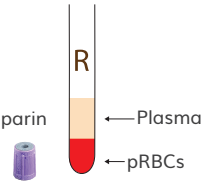
Do not use Heparin



RECIPIENT

Whole blood
- EDTA
- CPD
- ACD

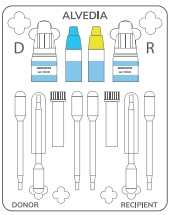
Do not use Heparin



[1] or serum if using a dry tube

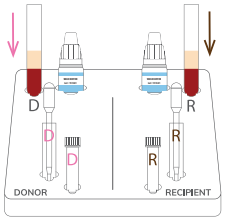
2

KEEP the material provided in the tray



Place vertically :
the blood tubes, the wash buffers, the large and small tubes as follow

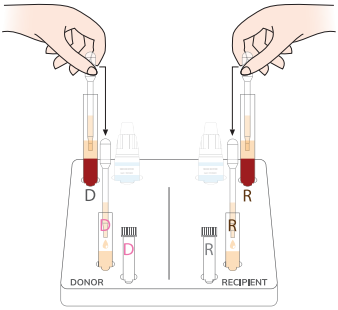
Write down «D» and «R» on the large and small tubes as follow



3

Take the pipette in the D large tube and transfer the entire plasma only from the donor's blood tube to the D large tube.

Discard the pipette.



Take the pipette in the R large tube and transfer the entire plasma only from the recipient's blood tube to the R large tube.

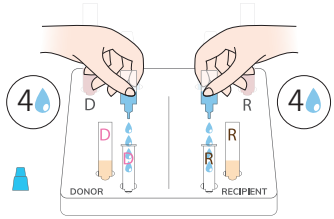
Discard the pipette.

KEEP YOUR ORIGINAL DONOR'S AND RECIPIENT'S BLOOD TUBES CONTAINING PRBCS

N°2 : PREPARATION OF MAJOR AND MINOR XM

1 **Take the only one blue top buffer for both small tubes**

Add 4 drops of the blue top buffer
into the D small tube
and 4 drops in the R small tube

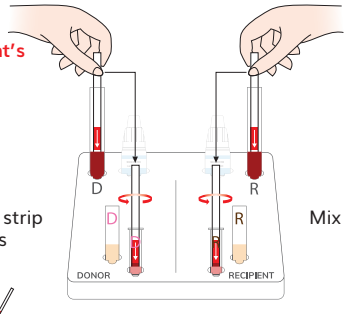


2 **Vortex briefly donor's and recipient's blood tubes containing pRBCs**

Dip the extremity
of the blood collector strip
into pRBCs DONOR's blood tube
(10µL of pRBCs)

Mix the extremity of the blood collector strip
in the D small tube during 7 seconds

Discard blood collector strip



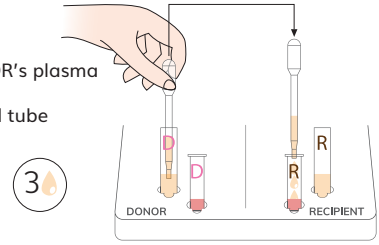
Dip the extremity
of the blood collector strip
into pRBCs RECIPIENT's blood tube
(10µL of pRBCs)

Mix the extremity of the blood collector strip
in the R small tube during 7 seconds

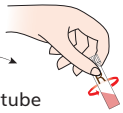
Discard blood collector strip

3 Take a new pipette and collectthe DONOR's plasma
from the D large tube
and add 3 drops of plasma in the R small tube
containing pRBCs suspension.

Discard the pipette

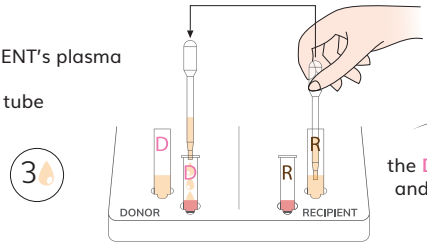


Close
the R small tube
and Mix gently

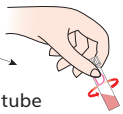


Take a new pipette and collect the RECIPIENT's plasma
from the R large tube
and add 3 drops of plasma in the D small tube
containing pRBCs suspension.

Discard the pipette



Close
the D small tube
and Mix gently



DISCARD BOTH D AND R LARGE TUBES CONTAINING THE REMAINING PLASMA.

N°3 : INCUBATION

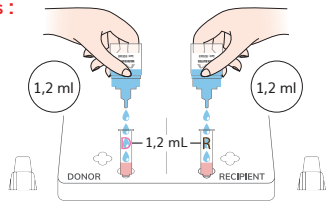
Incubate both D and R tubes
at room temperature
during 10 minutes

N°4 : WASHING PROCEDURE

FIRST WASH

1 **Take the wash buffers : 1 for each small tube.**

Fill both small tubes up to 1,2 ml of wash buffer



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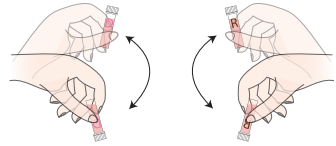


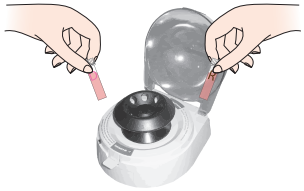
Mix both suspensions 3 times minimum

3

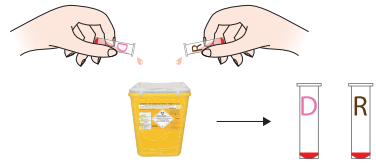
Centrifuge both tubes

2 min

at 1000g



4

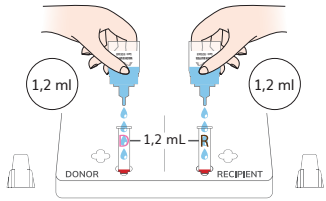


Discard the supernatant only : the RBCs pellet will stay at the bottom

SECOND WASH

5

Fill both small tubes up to 1,2 ml of wash buffer



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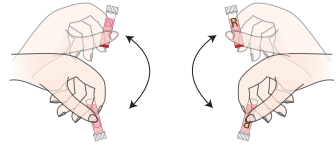


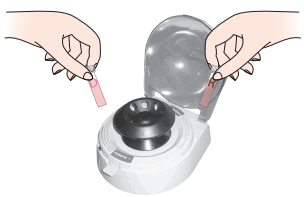
Resuspend completely the pellet by mixing both suspensions several times

7

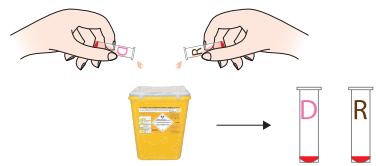
Centrifuge both tubes

2 min

at 1000g



8

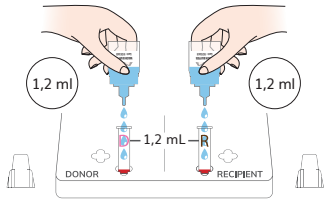


Discard the supernatant only : the RBCs pellet will stay at the bottom

THIRD WASH (PROCEDURE TO AVOID DILUTION BEFORE TESTING)

9

Fill both small tubes up to 1,2 ml of wash buffer



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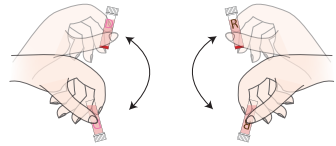


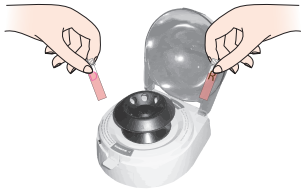
Resuspend completely the pellet by mixing both suspensions several times

11

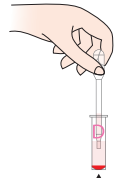
Centrifuge both tubes

2 min

at 1000g



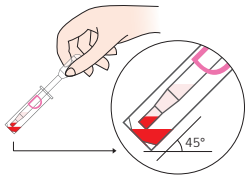
12 **A**



Using a new pipette, discard the entire supernatant only from the D tube

KEEP RBCs PELLET

B Remove the residual supernatant until reaching few RBCs



C Discard the remaining supernatant with few RBCs

Discard pipette

Perform the steps 12.A .B .C for the R tube

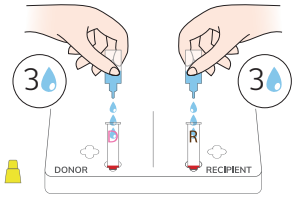
D Washed RBCs pellets ready for XM test procedures

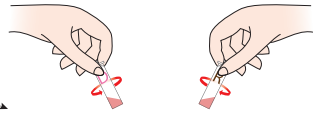
TO BE USED IMMEDIATELY

N°5 : XM TEST PROCEDURE

1 **Take the only one yellow top buffer for both tubes**

Add 3 drops of the yellow top buffer in the D tube and 3 drops in the R tube.

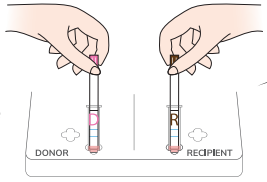


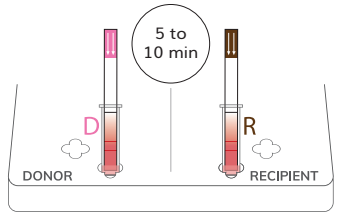


Resuspend completely the pellet by **mixing gently** both suspensions several times

2 Insert the PINK EmMa membrane in the D tube

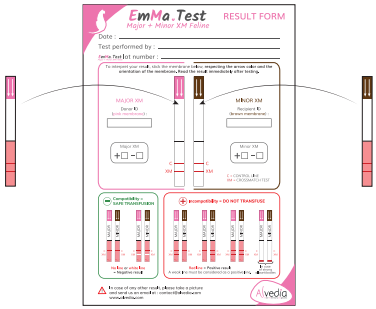
Insert the BROWN EmMa membrane in the R tube





WAIT UNTIL COMPLETE MIGRATION

3 Read the XM results at the end of the migration by sticking both membranes on the result form respecting the arrow colors



SCIENTIFIC ADVISES

It is MANDATORY to blood type the donor and the recipient before making a Feline XM Test.
Always transfuse COMPATIBLE blood.

Be careful, low titer and/or low affinity alloantibodies can be eluted during washing step procedures.
This can affect the sensitivity of the XM test (e.g. low affinity/titer of anti-B in A blood group cat's plasma)

Usually, these alloantibodies cannot induce severe or mild hemolytic transfusion reaction.

Troubleshooting
Please contact the Scientific Service Laboratory
contact@alvedia.com
+33(0)478 380 239

Alvedia
Alice Veterinary Diagnostic