Gel.Test
Major/Minor XM Equine

25 min

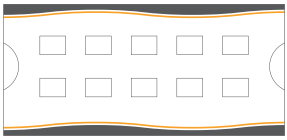
PROCEDURE FOR CANINE MAJOR/MINOR CROSSMATCH

Material provided :

10 Gel Tests

1 buffer solution

1 box of Gel Tests



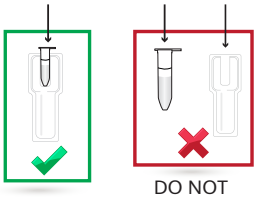
Sample material : **Donor packed red blood cells (pRBCs) and Recipient plasma.**
Preferably drawn into EDTA, CPD or ACD. Do not use Heparin.
For reliable results, use of freshly collected blood is indicated (<3 days at 2 - 8 °C).

Further material required : **Centrifuge Hettich EBA270 ; micropipette ; test tubes ; tips.**

WARNING : Use only the swinging bucket centrifuge Hettich EBA270.

N°1 : Preparation of material provided before use

Gel Test = Gel tube + Gel support



DO NOT DISSOCIATE

Allow the buffer solution and Gel Test to reach room temperature before use.

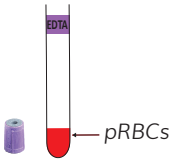
N°2 : Centrifugation of the Gel Test before use

Centrifuge the Gel Test **for 2 minutes at 3000 RPM with Hettich EBA270,** in order to remove air bubbles or gel drops in the upper part of the Gel Test.

N°3 : Preparation of blood samples for MAJOR XM*

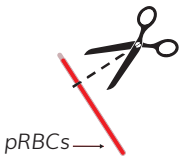
DONOR

Centrifuge blood tube **for 5 minutes at 3000 RPM, with Hettich EBA270.** Discard the plasma to collect pRBCs.



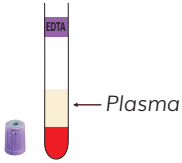
OR

Collect blood from blood bag segment.



RECIPIENT

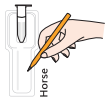
Centrifuge blood tube **for 5 minutes at 3000 RPM, with Hettich EBA270,** in order to collect plasma.



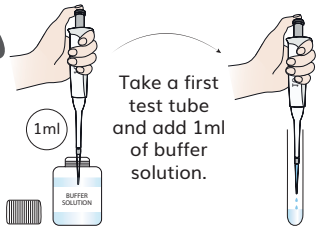
*MINOR XM : Reverse the blood samples by collecting RECIPIENT pRBCs and DONOR Plasma

N°4 : RBCs suspension preparation

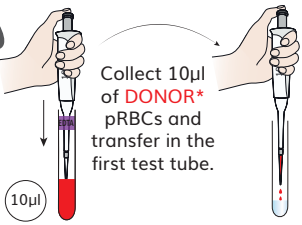
1. Identify the Gel Test.



2. Take a first test tube and add 1ml of buffer solution.



3. Collect 10µl of DONOR* pRBCs and transfer in the first test tube.

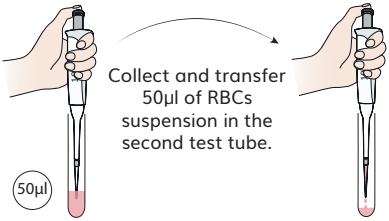


Mix the suspension. (Use immediately the suspension.)

*For MINOR XM collect 10µl of RECIPIENT pRBCs

N°5 : Major XM Gel Test procedure

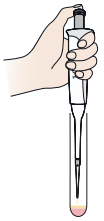
1. *Take a second test tube*



Collect and transfer 50µl of RBCs suspension in the second test tube.

2.

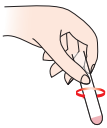
Collect and transfer 50µl of RECIPIENT* plasma in the second test tube.



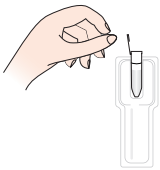
*For MINOR XM collect 50µl of DONOR plasma

3. Mix gently & incubate at room temperature :

4. After the 10 minutes incubation, mix gently the incubated suspension.



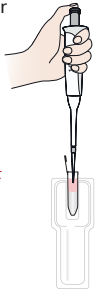
5. Open the cap.



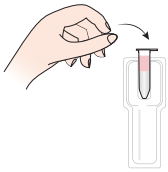
6.

Collect and transfer 30µl of incubated suspension in the Gel Test.

Drop gently the suspension on the top of the gel without touching the gel with the pipette.



7. Close the cap.



8. Insert the Gel Test and a balance Gel Test in the centrifuge.

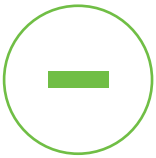
Gel Test

Balance Gel Test

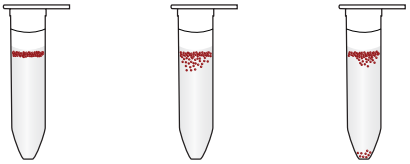
9. Centrifuge for 10 minutes at **1500 RPM** with Hettich EBA270 :

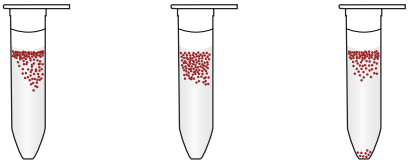
RESULT INTERPRETATION

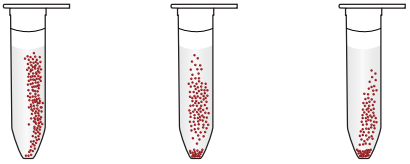
Compatibility = SAFE TRANSFUSION ⊖

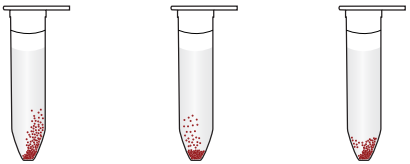


Incompatibility = DO NOT TRANSFUSE ⊕









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

Alvedia
Alice Veterinary Diagnostic

LIMITATIONS

- Do not use Gel Test tubes which show signs of drying.
- Gel Test tubes which show air bubbles or gel drops in the upper part of the tubes must be centrifuged before use.
- Strict adherence to the procedures and recommended equipment, especially the Hettich EBA270, is essential for a reliable and validated result.
- A non-specific centrifuge (fixed angle centrifuge) will give you false positive results.
- Debris, fibrin residues or other artefacts may cause a few unagglutinated cells to trap on top of the gel, but these tests should be interpreted as negative.
- Use of suspension solutions others than the provided one may modify the reactions.
- Too diluted or concentrated red blood cell suspensions can cause aberrant results.
- If the blood tube is hemolyzed, wash 3 times in PBS or saline buffer (Nacl 0,9%) to obtain washed pRBCs. Washing RBCs movie procedure : www.alvedia.com