

GEL TEST PROCEDURE

Gel.Test DAT *Canine*

PROCEDURE FOR CANINE DIRECT ANTI-GLOBULIN TEST
(COOMBS TEST)

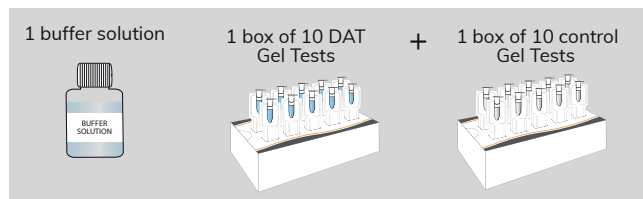


15 min



ALVEDIA
alice veterinary diagnostics

Material provided:



**MOVIE
PROCEDURE**
(Scan
the QR code)

- Test result
- Record result
- Troubleshooting

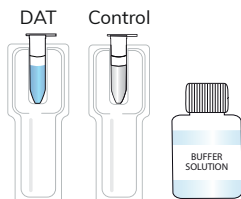
SAMPLE MATERIAL: Patient's packed red blood cells (pRBCs), drawn into **EDTA only**. **DO NOT USE HEPARIN**.
For reliable results, use of freshly collected blood is indicated (< 3 days at 2 - 8 °C).
If blood sample > 3 days OR hemolyzed: wash 1 time the blood.

MATERIAL REQUIRED: Specific centrifuge: Hettich EBA270 or Drucker True Bond ;
2 micropipettes (100-1000µl + 10-100µl) ; 10 test tubes (min. 1.5 ml).

A PREPARATION OF MATERIAL PROVIDED

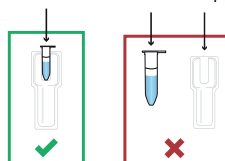


Allow the buffer solution and Gel Tests to reach **room temperature** before use.

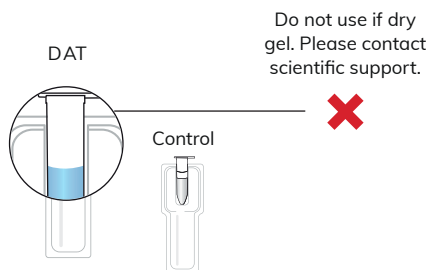
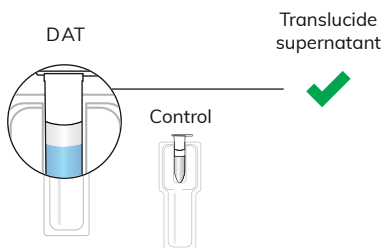


**DO NOT DISSOCIATE
FOR CENTRIFUGATION**

Gel Test = Gel tube + Gel support



B VISUAL CHECKING BEFORE USE



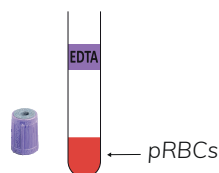
C PREPARATION OF BLOOD SAMPLE FOR DAT

PATIENT BLOOD TUBE:

Hettich: Centrifuge blood tube for **3 minutes at 3500 RPM**

Drucker: Centrifuge blood tube program **"Blood separation"** (3200 RPM / 3min)

+ Remove plasma to collect pRBCs.



GEL TEST PROCEDURE

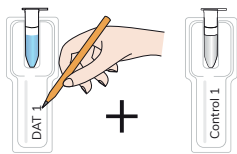
GelTest DAT *Canine*

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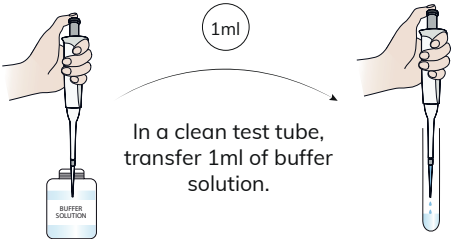
DAT GEL TEST PROCEDURE

STEP 1

Identify Gel Tests.

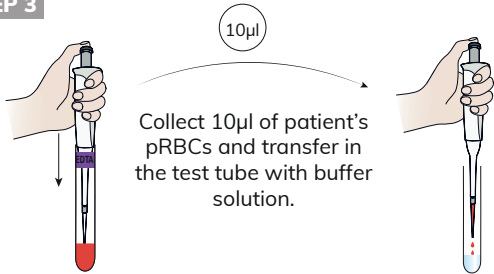


STEP 2



In a clean test tube,
transfer 1ml of buffer
solution.

STEP 3



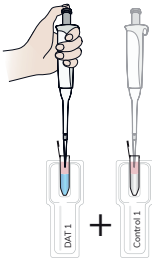
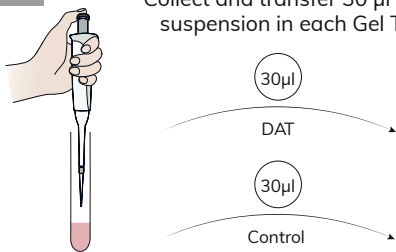
Collect 10µl of patient's
pRBCs and transfer in
the test tube with buffer
solution.

Mix the suspension.
(Use immediately
the suspension.)



STEP 4

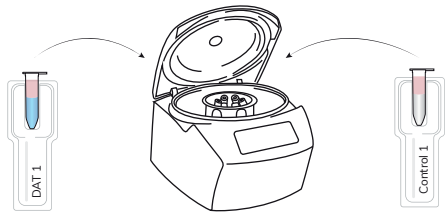
Collect and transfer 30 µl of the
suspension in each Gel Test.



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

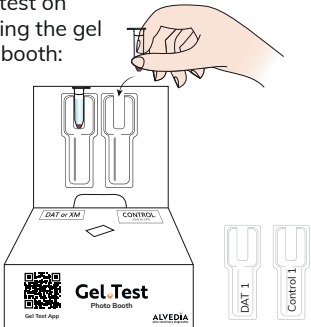
STEP 5

HETTICH: Centrifuge Gel Tests **for 10 minutes**
at 1500 RPM
DRUCKER: Centrifuge Gel Tests
program “Gel Test” (1500 RPM / 10min)



STEP 6

Scan your test on
the app using the gel
test photo booth:

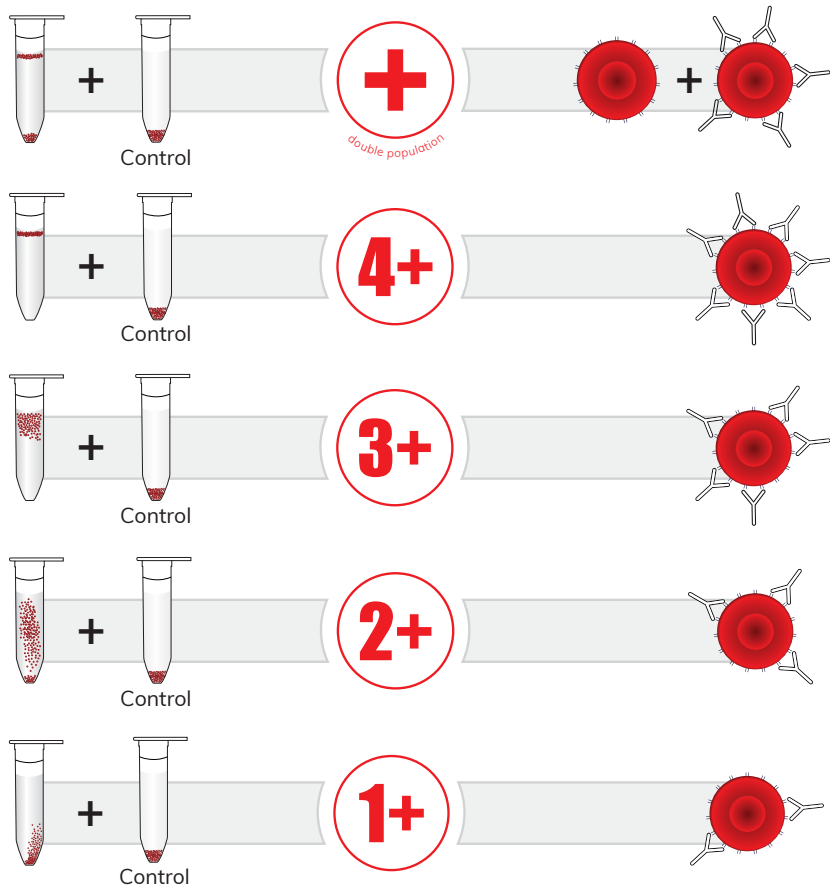


RESULT INTERPRETATION

NEGATIVE DAT: Absence of immunoglobulin (IgG & IgM) and / or C3 components binding to the RBC surface.



POSITIVE DAT: Presence of immunoglobulin (IgG & IgM) and / or C3 components binding to the RBC surface.



IF POSITIVE CONTROL: WASH THE RBCs 1 TIME AND PERFORM THE TEST AGAIN

SCIENTIFIC INFORMATION

Scientific information:

This DAT test (Direct Antiglobulin Test or Coombs Test) will detect auto-antibodies bound directly on the patient's RBCs, confirming immune-mediated hemolytic anemia (IMHA).

The test recognizes both non-associated or primary (idiopathic/autoimmune) IMHA and associated or secondary IMHA, in which red cell destruction is triggered by an underlying condition.

Main associated IMHA in dogs: infections (tick-borne diseases such as *Babesia*, *Ehrlichia*, *Anaplasma*; hemotropic *Mycoplasma*; *Leptospira*), neoplasia (lymphoma, hemangiosarcoma), drug reactions and inflammatory disorders.

Antibiotics particularly penicillins, cephalosporins and sulfonamides may cause **a false-positive DAT**. Interpret results with caution in patients receiving antibiotic therapy.

A positive DAT will remain positive even under corticosteroid therapy and will not turn negative until clinical remission is achieved.

The DAT is an ideal tool for patient monitoring: it can be repeated weekly to follow disease progression and adjust immunosuppressive therapy according to the results.

Transfusion cases:

After transfusion, a positive DAT may reflect alloantibodies bound to donor red blood cells (alloimmunization) rather than true IMHA and should be interpreted in the clinical context.

The DAT can also be used after transfusion to detect alloantibodies bound to donor red blood cells in cases of alloimmunization.

Test results must be interpreted in conjunction with the clinical and therapeutic context.

LIMITATIONS

- If the blood tube is hemolyzed OR more than 72 hours: wash 1 time in PBS or saline buffer (NaCl 0.9%) to obtain washed pRBCs.
- 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 tube must be centrifuged before use.
- Strict adherence to the procedures and recommended equipment, especially the Hettich EBA270 and Drucker True Bond, 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 gel, but these 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.

Procedure Alvedia - update 31/08/2026 Small Stories®

Troubleshooting / Information
Please contact the Scientific Support
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ALVEDIA
alice veterinary diagnostics