QUICK GUIDE

RespiSensor™ KIT120

Bovine respiratory disease (BRD) · swab or BAL sample

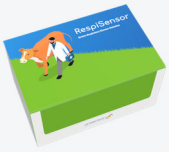
7 pathogens + positive control | LAMP · 40-minute run | Veterinary use only

unisensor DIAGNOSTIC ENGINEERING

Before you start



a Clean the work surface and put on **clean gloves**. Thaw frozen samples completely.



b Take **one aluminium pouch** out of the refrigerator; the analysis box stays at 2–8 °C.



c Switch on the **heating block** now: it takes **at least 15 min** to reach **100 °C**, needed before step 2.



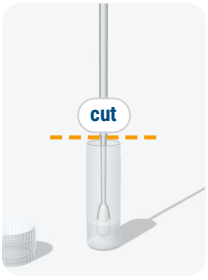
d Spin the **resuspension buffer tube** for **5 s** to bring the liquid down.

1 Collect the sample

into a lysis buffer tube from the sampling box

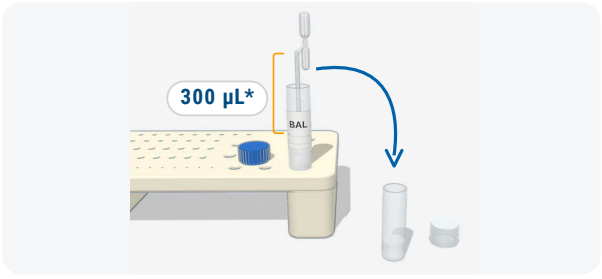
1A · Nasopharyngeal swab





- Collect the swab sample following good veterinary practice.
- Cut the shaft so the head stays in the buffer. Close tightly and label.
- Up to **3 swabs** may be pooled in one tube.

1B · Bronchoalveolar lavage (BAL)

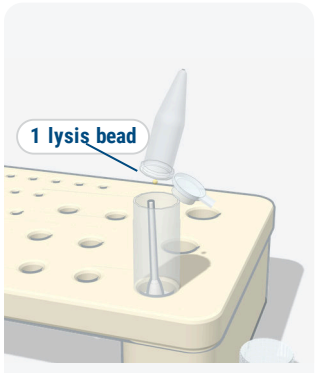


- Perform the BAL collection following good veterinary practice.
- Back at the clinic, draw **300 µL** of BAL with the Pasteur pipette (aluminium pouch) and transfer it into the lysis buffer tube. Close tightly and label.
- **Keep the pipette:** it is used again at step 5.

≥ 15 min	4 °C within 6 h	Test within 12 h
in the lysis buffer before step 2	store the tube cold	viral RNA degrades quickly

Both limits are counted from the time of collection.

2 Add the lysis bead



- Add **one lysis bead** to the lysis buffer tube.
- Vortex thoroughly.
- Incubate at room temperature.

5 min — no longer

Then go straight to step 3.

3 Thermal lysis



- Vortex again.
- Immediately place the tube in the heating block (already at 100 °C).

10 min at 100 °C

⚠ Burn hazard: never touch the block or the hot metal around it.

* Unisensor recommendation: the Pasteur pipette stem, filled up to the first bulb, holds 300 µL.

Steps 4 to 10 overleaf →

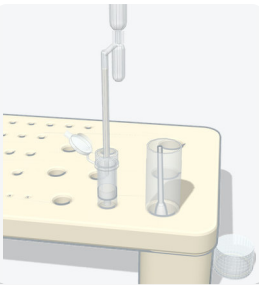
4 Cool down



- At the end-of-incubation alarm, remove the tube from the heating block.
- Let it cool at room temperature.

⏱ 3 min

5 Transfer the lysate



- Vortex the cooled tube.
- With the **same Pasteur pipette**, transfer **300 µL** of lysate into the spin filter column.
- Then discard the pipette.

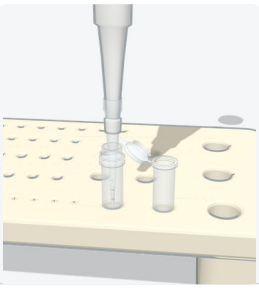
6 Filter



- Centrifuge the spin filter column.
- Always balance the centrifuge with a counterweight tube.

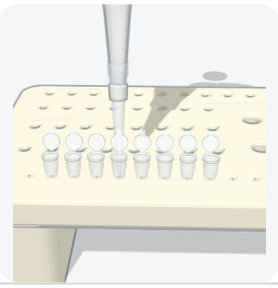
⏱ 30 s

7 Prepare the reaction mix



- Remove the **filter** from the spin column and discard it.
- Transfer **25 µL** of filtered lysate into the **resuspension buffer tube** (white cap).
- Vortex thoroughly, then spin briefly.

8 Fill the PCR strip



- Dispense **25 µL** of mix into **each of the 8 tubes**.
- Close the lids one by one.

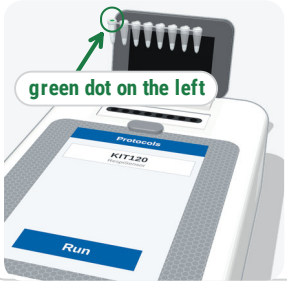
⚠ Never touch the bead at the bottom of a tube with the tip. If you do, change the tip.

9 Vortex and spin the strip



- Vortex the strip along its whole length.
- Spin briefly.
- Check: beads **fully rehydrated**, **no air bubble** at the bottom of the tubes.

10 Run the test



- Switch on the **ReadSensor LAMP**.
- Insert the strip with the **green-dot tube on the left**.
- Select the **KIT120** protocol and start.

⏱ 40 min, automatic

✓ Read the result

- **Results** tab: **POS.** (with detection time) or **NEG.** for each target. **Amp.** tab: amplification curves.
- Tube 8 carries the **positive control** (PC).

✓ **PC POS.** Run **valid**: read each target.

✕ **PC NEG.** Run **invalid**: repeat the test on the same sample.

Targets by tube (tubes 1 to 8 of the strip)

BACTERIA				VIRUSES			CONTROL
1	2	3	4	5	6	7	8
Histophilus somni	*Mycoplasma bovis*	*Pasteurella multocida*	*Mannheimia haemolytica*	Bovine coronavirus (BCoV)	Bovine parainfluenza virus 3 (BPIV3)	Bovine respiratory syncytial virus (BRSV)	**Positive control**

⚠ **Never open the PCR tubes** after amplification (contamination risk).
Never use reagents past their expiry date.
New gloves for each analysis; filtered tips only.
Return the analysis box to 2–8 °C after use.

This quick guide does not replace the user manual. Read the RespiSensor™ KIT120 user manual in full before first use.

Support: **support@unisensor.be** · unisensor.be

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