unisensor
peace of mind in food

DAIRY

KIT035 · RAPID ANTIBIOTIC SCREENING

TriSensor

Three antibiotic families. Six minutes. One dipstick.

β-lactams · Sulfonamides · Tetracyclines



VALIDATED ILVO

Independently validated
Official ILVO list of validated screening tests (extension 2021)

3
antibiotic families on a single dipstick

6 min
total test time (3 + 3 min at 40 °C)

200 µL
of raw milk per test

45
molecules with published limits of detection

The whole antibiotic picture, while the tanker waits

At milk reception, every minute counts. A β-lactam-only screen cannot see sulfonamides or tetracyclines, both widely used in veterinary medicine. **TriSensor screens raw cow milk for all three families on one dipstick**, with a separate test line for each family, in about six minutes.

Six minutes to result

3 min + 3 min at 40 °C in a HeatSensor, then read within 2 minutes: the pace of routine milk reception.

Three families, three lines

Each family has its own test line next to the control line: a positive shows at once which family is involved.

Validated by ILVO

Listed on the official ILVO list of validated screening tests (TriSensor extension, 2021).

Sensitive where it counts

Penicillin G 1–2.5 ppb, cefoperazone 1–3, cefalonium 1–4, sulfapyridine 0.5–2, sulfamethazine 1–2 ppb.

Read by eye or by instrument

A clear visual reading against the control line, or objective, traceable results with ReadSensor 2 or Readip 2.

Quality control built in

The 96-test kit includes a positive and a negative control, plus a 200 µL micropipette and tips.

BUILT FOR

Dairy milk reception
Routine screening of incoming milk

Milk collection points
A quick decision before loading

QC laboratories
Runs of up to 8 samples

TWO FORMATS

×96 KIT035
12 tubes, each with 8 microwells and 8 dipsticks. Positive and negative controls, 200 µL micropipette and tips included.

×32 KIT035X32
1 tube with 4 strips of 8 microwells and 32 dipsticks. Controls KIT102 (−) / KIT103 (+) and micropipette not included.

FROM RAW MILK TO RESULT

How it works



Add milk
Microwells in the block. Add **200 µL** of raw milk, close the top, press START.

Incubate
Then load the dipsticks in the closed top. First incubation: **3 min at 40 °C**.

Dip
The dipsticks drop into the microwells **automatically**: **3 more minutes**, nothing to press.

Read
Read **within 2 minutes**, by eye or with a reader.

0 min — 3 min · microwell | **3 min** — 3 min · dipstick | **6 min** — Read within 2 min

Sensitivity: limits of detection

ppb (µg/kg) in raw cow milk

Penicillins — β-lactams · 11

Molecule	EU MRL	LOD	LOD vs MRL (0 · MRL · 2×)
Penicillin G	4	**1–2.5**	
Ampicillin	4	**3–4**	
Amoxicillin	4	**3–4**	
Oxacillin	30	**7–14**	
Cloxacillin	30	**7–9**	
Dicloxacillin	30	**3–6**	
Nafcillin	30	**70–100**	
Phenoxymethylpenicillin	–	**2–5**	no EU MRL
Piperacillin	–	**1–4**	no EU MRL
Ticarcillin	–	**10–30**	no EU MRL
Aspoxicillin	–	**1–5**	no EU MRL

Tetracyclines — 4 molecules

Molecule	EU MRL	LOD	
Tetracycline	100	**80–100**	
Oxytetracycline	100	**40–65**	
Chlortetracycline	100	**25–55**	
Doxycycline	Forbidden	**12–20**	not authorised

Cephalosporins — β-lactams · 15

Molecule	EU MRL	LOD	LOD vs MRL (0 · MRL · 2×)
Ceftiofur	100*	**8–12**	
Desfuroyl Ceftiofur	100*	**30–80**	
Cefquinome	20	**14–20**	
Cefazolin	50	**9–18**	
Cephapirin	60*	**3–5**	
Desacetyl Cephapirin	60*	**20–50**	
Cefacetrile	125	**14–20**	
Cefoperazone	50	**1–3**	
Cefalexin	100	**> 700**	
Cefalonium	20	**1–4**	
Cefuroxime	–	**100–200**	no EU MRL
Cefalotin	–	**4–6**	no EU MRL
Ceftriaxone	–	**4–10**	no EU MRL
Ceftizoxime	–	**300–450**	no EU MRL
Cefotaxime	–	**20–40**	no EU MRL

Sulfonamides — 15 molecules

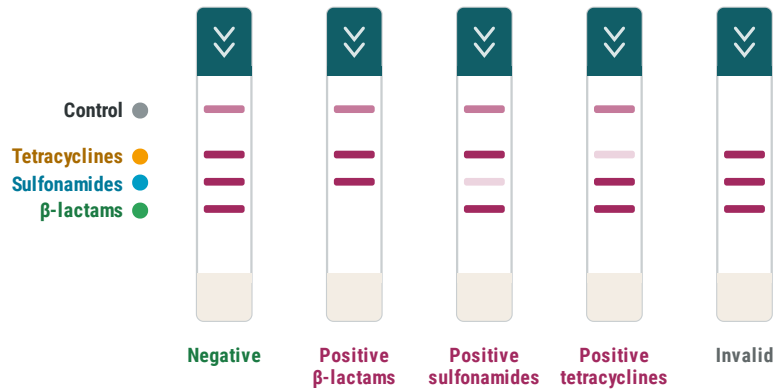
Molecule	EU MRL	LOD	LOD vs MRL (0 · MRL · 2×)
Sulfadiazine	100*	**8–10**	
Sulfapyridine	100*	**0.5–2**	
Sulfathiazole	100*	**7–12**	
Sulfamethoxazole	100*	**> 320**	
Sulfamethazine	100*	**1–2**	
Sulfamethoxypyridazine	100*	**2–4**	
Sulfadimethoxine	100*	**15–20**	
Sulfacetamide	100*	**> 300**	
Sulfamerazine	100*	**2–3**	
Sulfamonomethoxine	100*	**8–12**	
Sulfaquinoxaline	100*	**14–18**	
Sulfachloropyridazine	100*	**10–25**	
Sulfaguanidine	100*	**15–25**	
Sulfamethizole	100*	**> 220**	
Sulfasalazine	100*	**> 250**	

LOD at or below the EU MRL — LOD above the EU MRL

Controls: positive = raw milk spiked with penicillin G, sulfadimethoxine, oxytetracycline; negative = antibiotic-free raw milk

EU MRL: Reg. (EU) No 37/2010. * Sum of residues (ceftiofur, cephapirin and their metabolites; all sulfonamides). – : no EU MRL for milk. Forbidden: not authorised in dairy animals.

Reading the result



- **Valid test:** the control line is visible and all lines are straight and sharp.
- **Negative:** test line darker than the control line (below the LOD).
- **Positive:** test line similar to, lighter than or absent compared with the control line (at or above the LOD).
- **Invalid:** no control line, or blurred, irregular lines. Run a new test.

In doubt? Consider the sample positive and confirm with at least two more tests.

Also required

NOT IN THE KIT



HeatSensor
40 °C incubator, Duo (APP032) or Octo (APP052)

- Timer
- 200 µL micropipette for the ×32 format

Optional readers

ReadSensor 2 (APP088)
Desktop reader

Readip 2 (APP073)
Pocket reader, with the Sensor Line holder APP167 supplied



Compatible milk

Raw commingled cow milk only, tested within 48 h of milking.

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