

GENTAMICIN ELISA KIT

The misuse of gentamicin in breeding can determine the presence of residues in biological fluids and animal tissue.

The European Commission established a gentamicin Maximum Residue Limit (MRL) of 50 ppb for muscle and fat, 200 ppb for liver, 750 ppb for kidney and 100 ppb for milk.

Food industries can apply this rapid method both to screen foodstuffs and to identify the drug residue in case of positive results by microbial inhibition assays. The dosing range around the MRLs is fitting the purpose.

Assay principle

Competitive enzyme immunoassay.

Applications

Tissue, urine, raw milk.

Standard curve range

- Tissue, urine: 3 – 250 ng/ml.
- Raw milk: 5 – 250 ng/ml.

Detection limits

- Tissue: 30 ppb.
- Raw milk: 50 ppb.
- Urine: 75 ppb.

Measuring ranges

Tissue

- 30 – 2500 ppb.

Raw milk

- 50 – 2500 ppb.

Urine

- 75 – 6250 ppb.

Specificity (% of cross-reactivity)

Gentamicin	100
Neomycin	< 0.1
Kanamycin	< 0.1
Streptomycin	< 0.1

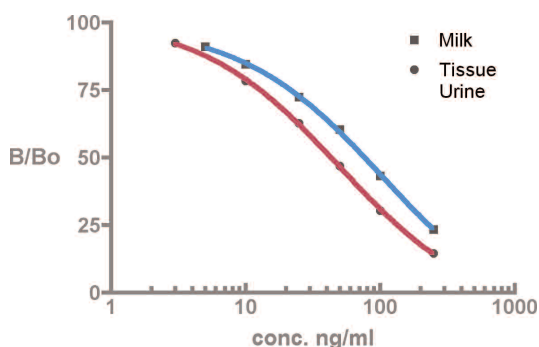
Sample preparation

- Tissue: homogenization, extraction, centrifugation, dilution.
- Urine: centrifugation or filtration, dilution.
- Raw milk: centrifugation, dilution.

Assay time

1 h (sample preparation not included).

Example of calibration curve



Advantages

- Fast.
- Easy sample preparation; no columns required.
- 48 wells format available.
- Measuring range fitting with regulatory limits for tissue and milk samples.
- No lyophilized reagents.
- Reagent stable at 4 °C after opening.
- Spreadsheet to calculate sample concentration downloadable at www.tecnalab.com.

Storage

+2/+8 °C.

Shelf-life

8 months from date of manufacturing.

(rev. 08/08/06)

I'screen

GENTAMICIN

Cat. N. AB670AB671

Kit contents

- Microtiter 96/48 well plate, 12/6 strips with 8 breakable wells.
- Gentamicin standard, concentrated.
- Gentamicin standard solutions, ready to use.
- Milk standard diluent, concentrated.
- Enzyme conjugate, concentrated.
- Enzyme conjugate diluent, ready to use.
- Dilution buffer, ready to use.
- Washing buffer, concentrated.
- Developing solution, ready to use.
- Stop solution, ready to use.
- Instructions.

Manufacturer

Tecna Srl, ISO9001/UNI EN ISO 9001 – Ed. 2000 certified (SGS, N°. IT01/0291).

Materials not provided

- Distilled water.
- Trichloroacetic acid (tissue).
- Sodium hydroxide (tissue).

Additional equipment

- Meat grinder (tissue)
- Balance (tissue).
- Homogenizer or rotating wheel (tissue).
- Centrifuge possibly refrigerated (Relative Centrifugal Force requested: 2000 xg for tissue; 3000 xg for raw milk)
- Centrifuge (Relative Centrifugal Force requested: 2000 xg or filter paper, Whatmann n.1 or similar, for urine).
- pH paper (tissue).
- Micropipette 20-200 µl and 200-1000 µl with suitable tips.
- Multichannel micropipette 20-300 µl with suitable tips and reagent boats (optional).
- ELISA plate or strip reader with a 450 nm filter.