

Nitroimidazole ELISA Kit, Cat# DE-100320, 96 tests

The nitroimidazole ELISA is used for the detection of nitroimidazole derivatives (metronidazole and dimetridazole.) in honey samples. *This kit is for research use only.*

Kit Components	ELISA Kit Features
<ol style="list-style-type: none"> 1. Antigen coated Microtiter plate (96 wells) 2. Standard solution; 0ppb-9.6ppb. 3. Spiking standard solution 100ppb. 4. Enzyme conjugate, 12ml 5. Antibody solution, 7ml 6. Substrate solution A, 7ml 7. Substrate solution B, 7ml 8. Stop solution, 7ml 9. 20x wash buffer (40ml). 10. Extraction solution, 50ml 	<ul style="list-style-type: none"> • Nitroimidazole Pre-coated, stabilized, ready-to-use 96-well strip plate, suitable for multiple runs over 6-9 months. • Standards (0, 0.05, 0.15, 0.6, 2.4, 9.6) ppb. • 100 ul samples, (dilution factor : 0.5) • Sensitivity ~ 0.1ppb. High recovery and assay precision. • 85 mins assay (45+30). 2 incubation steps at RT. • Contains all necessary reagents. Stability ~12 months • For in vitro research use only.

Assay Procedure: Allow all reagents to reach room temperature.

- Step 1. Pipet **50 ul** each of pre-diluted standards, samples to pre-coated wells.
- Step 2. Add **50 ul** of antibody solution, Mix gently, cover and incubate at **4 C for 60 min.**
- Step 3. Aspirate and wash **4X**. Add **100 ul of enzyme conjugate** to wells. Mix gently, cover and incubate at **RT for 30 min.**
- Step 4. Add **50 ul of stop Soln** to each well and mix gently (blue color turns yellow). Measure absorbance at 450 nm.

Honey Samples Processing

1. Weigh 3.0±0.05g of honey into a 50ml polystyrene centrifuge tube;
2. Add 3 ml of 0.1M carbonate buffer solution (solution 1), dissolve the honey sample completely;
3. Add 6ml of ethyl acetate and 3ml of n-hexane shake for 5min, centrifuge for 5min, at least 3000g at room temperature (2025°C);
4. Transfer 6ml of supernatant organic phase to 50ml polystyrene centrifuge tube, add 2ml of 2M NaOH (solution 2), vortex for 5min;
5. Centrifuge for separation: 5min/3000g/ambient temperature;
6. Transfer 4ml supernatant organic phase to 10ml clean glass tube, dry under 50-60°C water bath nitrogen gas;
7. Add 1ml n-hexane, vortex for 30s, add 0.5ml extraction solution (kit component), vortex for 30s;
8. Centrifuge for separation: 5min/3000g/ambient temperature;
9. Remove the supernatant organic phase, and take 50µl of the aqueous phase for assay. Dilution factor: 0.5

Interpretation of results

The mean values of the absorbance values obtained from the standards and the samples are divided by the absorbance value of the first standard (zero standards) and multiplied by 100%.

Accuracy: Honey: 100 ± 15%; **Reproducibility (%CV):** >10

Cross reactivity: Cross reactivity with the following analytes: Dimetridazole (216%) Metronidazole (100%), Ronidazole (82%), Secnidazole: 20%, Ornidazole: 18%, Tinidazole: < 6%

General Information

Several derivatives of nitroimidazole constitute the class of nitroimidazole antibiotics that have been used to combat anaerobic bacterial and parasitic infections. The most common examples are metronidazole and dimetridazole. Nitroimidazoles are broad-spectrum anthelmintics, which can kill amebic protozoa and anaerobic bacillus, as well as cocci. The nitroimidazoles are bactericidal through toxic metabolites which cause DNA strand breakage. They can also be used for stopping surgical site infections Nitroimidazole antibiotics are banned from the use in food producing animals. Poisoning with nitroimidazoles results in infertility and hepatic and renal insufficiency.. Overdose nitroimidazoles in food would cause anorexia, nauopathia, diarrhea and other side effects to humans.

ADI's Nitroimidazole ELISA Kit is a sandwich assay for the detection nitroimidazole derivatives in feed samples. ADI has developed ELISA kits for the detection of a wide range of antibiotics.

Related Items:

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| DE-100010 | Clenbuterol ELISA kit, 96 tests (For Urine, Serum, Feed, Meat, Liver) |
| DE-100020 | Ractopamine ELISA kit, (For Liver, Urine, Feed), 96 tests |
| DE-100030 | Salbutamal ELISA kit, For Urine, Tissue, Feed, Animal Tissue, Aquatic, Honey, Intestine., 96 tests |
| DE-100040 | Chloramphenicol ELISA kit, 96 tests (For Animal Tissue, Aquatic, Honey, Intestine, Urine, Egg, Milk, Serum) |
| DE-100050 | Florfenicol ELISA kit (For Animal Tissue, Aquatic, Honey), 96 tests |
| DE-100060 | Nitrofurantol (AMOZ) ELISA kit (For Fish, Shrimp, Honey, Chicken/Liver), 96 tests |
| DE-100070 | Nitrofurantol (AHD) ELISA kit, (For Fish, Shrimp, Honey, Chicken/Liver), 96 tests |
| DE-100140 | Ampicillin ELISA kit, (For Pork/Liver, Chicken, Duck, Shrimp, Fish, Honey, Milk), 96 tests |
| DE-100150 | Benzyl Penicillin ELISA kit, (For Pork/Liver, Chicken, Duck, Shrimp, Fish, Honey, Milk), 96 tests |

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