Analysis of Hormones & Anabolics

Hormones and anabolics can be used as growth promoters in livestock breeding to enhance average daily weight gain and meat/fat ratio. As a consequence, hormone and anabolic residues can occur in food of animal origin.

Due to their systemic function, hormonal residues in food bear a potential health risk for the consumer. Additionally, the entry of hormonal active substances into surface and ground water by manure of livestock animals can have an ecological impact on aquatic ecosystems.
Consequently, most countries have banned the use of hormones and anabolics in livestock breeding completely with exceptions for veterinary purposes.

Test systems for the analysis of hormones & anabolics in food

RIDASCREEN®

ELISAs for quantitative Screening

Advantages

- Quantitative Results
- Detects the most commonly used hormones und anabolics
- Applications for many matrices
- Evaluation with RIDA®SOFT Win

Hormones & Anabolics

Product	Description	No. of Tests/Amount	Art. No.
ß-Agonists	**ELISA Microtiter Plates**		
RIDASCREEN® Clenbuterol	Enzyme immunoassay for quantitative analysis of clenbuterol in urine, liver, meat and tissue* Detection limit in urine: 0.2 ppb clenbuterol, 2 ppb salbutamol; tissue: 0.04 ppb clenbuterol	96 determinations Incubation time: over night and 1 hr 30 min	R1705
RIDASCREEN® Clenbuterol Fast	Enzyme immunoassay for quantitative analysis of clenbuterol in urine, serum/plasma, liver, kidney, meat and tissue* Detection limit in urine: 0.2 ppb clenbuterol, 2 ppb salbutamol; tissue: 0.04 ppb clenbuterol	96 determinations Incubation time: 1 hr	R1701
RIDA® Clenbuterol Spiking Solution	100 ng/ml	1 ml	R1798
Clenbuterol Assay Control (positive)	Freeze-dried calves urine positive for clenbuterol	1 x 5 ml	R1707
Clenbuterol Assay Control (negative)	Freeze-dried calves urine negative for clenbuterol	1 x 2 ml	R1708
RIDASCREEN® Ractopamin	Enzyme immunoassay for quantitative analysis of ractopamine in urine, meat, liver Detection limits: urine 0.6 ppb, meat 0.2 ppb, liver 0.3 ppb	96 determinations Incubation time: 1 hr 30 min	R9901
RIDA® Ractopamin Spiking Solution	10 ng/ml	1 ml	R9999
RIDASCREEN® ß-Agonists	Enzyme immunoassay for quantitative analysis of ß-agonists in urine, serum, meat, liver, milk and feed Detection limits: urine 150 ppt, serum 900 ppt, meat 100 ppt, liver 130 ppt, milk 45 ppt, feed 1000 ppt	96 determinations Incubation time: 1 hr	R1704
RIDA® ß-Agonists Clenbuterol Spiking Solution	500 ng/ml	1 ml	R1799
Stilbenes	**ELISA Microtiter Plates**		
RIDASCREEN® DES	Enzyme immunoassay for quantitative analysis of DES in urine, bile, muscle and feces* Detection limit: urine 0.2 ppb, muscle 0.1 ppb	96 determinations Incubation time: over night and 1 hr 30 min	R2701
RIDA® DES Spiking Solution	10 ng/ml	1 ml	R2799
DES Assay Control (positive)	Freeze-dried calves urine positive for DES	1 x 5 ml	R2707
DES Assay Control (negative)	Freeze-dried calves urine negative for DES	1 x 5 ml	R2708
Sex hormones	**ELISA Microtiter Plates**		
RIDASCREEN® 17ß-Östradiol	Enzyme immunoassay for quantitative analysis of 17ß-estradiol in bovine plasma* Detection limits: bovine plasma* 0.02 ppb	96 determinations Incubation time: 2 hrs 30 min	R2301
RIDA® 17ß-Östradiol Spiking Solution	200 ng/ml	1 ml	R2399
RIDASCREEN® Testosteron	Enzyme immunoassay for quantitative analysis of testosterone in bovine plasma* Detection limit: serum 0.02 ppb	96 determinations Incubation time: 2 hrs 30 min	R2401
RIDA® Testosteron Spiking Solution	500 ng/ml	1 ml	R2499

* Further applications on request.

Hormones & Anabolics

Product	Description	No. of Tests/Amount	Art. No.
Gestagens	**ELISA Microtiter Plates**		
RIDASCREEN® Acetylgestagene	Enzyme immunoassay for quantitative analysis of MPA and other acetylgestagenes in bovine perirenal fat* Detection limits: 0.3 ppb - 0.6 ppb MPA	96 determinations Incubation time: 2 hrs 30 min	R1801
RIDA® Acetylgestagene Spiking Solution	100 ng/ml medroxyprogesterone	1 ml	R1899
RIDASCREEN® Melengestrolacetat	Enzyme immunoassay for quantitative analysis of melengestrolacetate in bovine perirenal fat and muscle meat Detection limits: bovine perirenal fat 0.3 ppb, muscle 0.075 ppb	48 determinations Incubation time: 2 hrs 30 min	R6502
RIDA® Melengestrolacetat Spiking Solution	100 ng/ml	1 ml	R6599
Anabolic steroids	**ELISA Microtiter Plates**		
RIDASCREEN® Trenbolon	Enzyme immunoassay for quantitative analysis of trenbolone in meat, liver, tissue, serum, bile, urine and feces* Detection limit: urine 0.4 ppb	96 determinations Incubation time: 2 hrs 30 min	R2601
RIDA® Trenbolon Spiking Solution	50 ng/ml	1 ml	R2699
Trenbolone Assay Control (negative)	Freeze-dried calves urine negative for trenbolone	1 x 5 ml	R2608
RIDASCREEN® Methyltestosteron	Enzyme immunoassay for quantitative analysis of methyltestosterone in urine, meat, fish and liver Detection limit: porcine urine 540 ppt, bovine urine 750 ppt, beef 450 ppt, pork 390 ppt, fish 430 ppt, porcine liver 180 ppt, bovine liver 720 ppt	96 determinations Incubation time: 2 hrs 15 min	R3611
RIDA® Methyltestosteron Spiking Solution	100 ng/ml	1 ml	R3699
RIDASCREEN® 19-Nortestosteron	Enzyme immunoassay for quantitative analysis of 19-nortestosterone in meat and urine Detection limits: urine 3 ppb, meat 0.7 ppb	96 determinations Incubation time: 1 hr 15 min	R2801
RIDA® 19-Nortestosteron Spiking Solution	1 µg/ml	1 ml	R2899
RIDASCREEN® Ethinylöstradiol	Enzyme immunoassay for quantitative analysis of ethinylestradiol in bovine/porcine urine, beef/pork and bovine plasma Detection limits: bovine/porcine urine 370 ppt, beef 230 ppt, pork 200 ppt, bovine plasma 50 ppt	96 determinations Incubation time: 2 hrs 30 min	R2511
RIDA® Ethinylöstradiol Spiking Solution	20 ng/ml	1 ml	R2599
Non-steroidal compounds	**– ELISA Microtiter Plates**		
RIDASCREEN® Zeranol	Enzyme immunoassay for quantitative analysis of zeranol in urine* Detection limit: urine 1.5 ppb	96 determinations Incubation time: 1 hr 15 min	R3301
RIDA® Zeranol/ Spiking Solution	20 ng/ml	1 ml	R3399
Accessories	**Solid Phase Columns**		
RIDA® C18 columns	Solid phase extraction columns for use in conjunction with RIDASCREEN® ELISAs	100 columns	R2002

* Further applications on request.

Analysis of Antibiotic Residues

In addition to their function as veterinary drugs, antibiotics can be used as antimicrobial growth promoters in livestock breeding. As a consequence of incorrect or illegal use, antibiotic drug residues in food of animal origin can remain.

Because of the potentially carcinogenic, toxic and allergic properties of antibiotic residues, contaminated food is a direct health risk for consumers. Additionally, the suspected promotion of multi-resistant pathogen bacteria by the inappropriate use of antibiotics in animal husbandry and food production bears an increasing risk for public health.
For these reasons, most countries have established Maximum Residue Limits (MRLs) and monitoring programs for antibiotic residues in food. Non-compliance with these legislations e.g. in export can lead to severe penalties.
For biotechnological industries, antibiotic residues bear additionally a technological and economic risk, as they can inhibit production processes involving microorganisms.

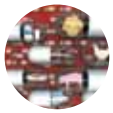
Test systems for the analysis of antibiotic residues in food and feed

		
RIDASCREEN®	**EASI-EXTRACT®/RIDA®**	**Premi®Test**
ELISAs for quantitative screening	Immunoaffinity columns for sample clean-up	Microbial inhibition test for qualitative screening
Advantages		
• Quantitative results of single antibiotics or antibiotic groups • Detects the most commonly used antibiotics • Applications for wide range of matrices • Evaluation with RIDA®SOFT Win	• For ELISA, HPLC or LC-MS/MS-Analysis • For complex matrices such as honey • Reduced interferences • Excellent recovery	• Detects a broad spectrum of antibiotics • Easy to handle • No sophisticated equipment needed • Fast (-er than plate tests) • Sensitive (EU-MRL conform) • Validated (AOAC-RI PTM℠ and AFNOR NF VALIDATION)

Antibiotics

Product	Description	No. of Tests/Amount	Art. No.
Phenicols	**ELISA Microtiter Plates**		
RIDASCREEN® Chloramphenicol	Enzyme immunoassay for quantitative analysis of chloramphenicol in different matrices* Detection limits: depending on matrix 5 - 50 ppt	96 determinations Incubation time: 1 hr 15 min	R1505
RIDA® Chloramphenicol Spiking Solution	50 ng/ml	1 ml	R1599
	Immunoaffinity Columns		
EASI-EXTRACT® CHLORAMPHENICOL	Immunoaffinity columns for sample clean-up prior to the analysis of chloramphenicol using HPLC or LC-MS/MS	10 columns 50 columns	RBRP300 RBRP300B
RIDA® Chloramphenicol column	Immunoaffinity columns for the clean-up of honey and wine samples prior to the analysis with RIDASCREEN® Chloramphenicol ELISA	50 columns	R1508
Tetracyclins	**ELISA Microtiter Plates**		
RIDASCREEN® Tetracyclin	Enzyme immunoassay for quantitative analysis of tetracycline, in milk, milk powder, cheese, honey, meat and shrimp* Detection limits: milk 1 ppb, milk powder 5 ppb, cheese 4 ppb, honey 4 ppb, meat 2 ppb, shrimp 1.5 ppb	96 determinations Incubation time: 1 hr 30 min	R3505
RIDA® Tetracyclin Spiking Solution	Lyophilisate, produces 10 ml of a 100 ng/ml stock solution	1 lyophilisate, 1 reconstitution buffer	R3599
Nitrofurans	**ELISA Microtiter Plates**		
RIDASCREEN® Nitrofuran (AOZ)	Enzyme immunoassay for quantitative analysis of AOZ in shrimp, meat (poultry, pork, beef), liver, fish, whole egg, milk, honey Detection limits: shrimp, fish, milk 50 ppt, meat/liver/whole egg/honey 100 ppt	96 determinations Incubation time: 1 hr 15 min	R3703
RIDA® Nitrofuran (AOZ) Spiking Solution	20 ng/ml	1 ml	R3798
RIDASCREEN® Nitrofuran (AMOZ)	Enzyme immunoassay for quantitative analysis of AMOZ in shrimp, meat (poultry, pork, beef), liver, fish, whole egg Detection limit: 200 ppt	96 determinations Incubation time: 1 hr 15 min	R3711
RIDA® Nitrofuran (AMOZ) Spiking Solution	20 ng/ml	1 ml	R3799
RIDASCREEN® Nitrofuran (AHD)	Enzyme immunoassay for quantitative analysis of AHD in shrimp Detection limit: shrimp 200 ppt	96 determinations Incubation time: 1 hr 15 min	R3713
RIDA® Nitrofuran (AHD) Spiking Solution	20 ng/ml	1 ml	R3796
RIDASCREEN® Nitrofuran (SEM)	Enzyme immunoassay for quantitative analysis of SEM in meat (poultry, pork, beef), fish, shrimp Detection limits: beef, pork, shrimp 300 ppt, fish 360 ppt, poultry 400 ppt	96 determinations Incubation time: 1 hr 15 min	R3715
RIDA® Nitrofuran (SEM) Spiking Solution	20 ng/ml	1 ml	R3797

* Further applications on request.



Antibiotics

Product	Description	No. of Tests/Amount	Art. No.
Sulfonamides	**ELISA Microtiter Plates**		
RIDASCREEN® Sulfamethazin	Enzyme immunoassay for quantitative analysis of sulfamethazine in milk, meat and kidney* Detection limits: milk 4 ppb, meat, kidney 18 ppb	96 determinations Incubation time: 2 hrs 30 min	R3001
RIDA® Sulfamethazin Spiking Solution	10 µg/ml	1 ml	R3098
RIDASCREEN® Sulfonamide	Enzyme immunoassay for quantitative analysis of sulfonamides in egg, meat, fish, shrimp, honey, milk Detection limits: poultry/egg 1.5 ppb, pork, fish, shrimps, honey 2 ppb, milk 3.5 ppb	96 determinations Incubation time: 1 hr 15 min	R3004
RIDA® Sulfonamide Sulfamethoxypyridazin Spiking Solution	0.1 µg/ml	1 ml	R3099
Aminoglycosides	**ELISA Microtiter Plates**		
RIDASCREEN® Streptomycin	Enzyme immunoassay for quantitative analysis of streptomycin and dihydrostreptomycin in milk, honey, meat and liver* Detection limits: honey 5 ppb, milk 10 ppb, meat 20 ppb, liver 25 ppb	96 determinations Incubation time: 1 hr 15 min	R3103
RIDA® Streptomycin Spiking Solution	10 µg/ml	1 ml	R3199
Quinolones	**ELISA Microtiter Plates**		
RIDASCREEN® Chinolone/ Quinolones	Enzyme immunoassay for quantitative analysis of quinolones in shrimp, fish, eggs, meat Detection limits: shrimp 6 ppb, fish 8 ppb, egg 9 ppb, meat 10 ppb	96 determinations Incubation time: 1 hr 15 min	R3113
RIDA® Ciprofloxacin Spiking Solution	1 µg/ml	1 ml	R3198
Polypeptides	**ELISA Microtiter Plates**		
RIDASCREEN® Bacitracin	Enzyme immunoassay for quantitative analysis of bacitracin in milk, meat, eggs, feed and urine Detection limits: milk 11 ppb, meat 9 ppb, eggs 11 ppb, feed 82 ppb, urine 23 ppb	96 determinations Incubation time: 1 h 30 min	R2901
Premi®Test	**Test Ampoules**		
Premi®Test	Microbial inhibition test for the screening of antibiotic residues in food of animal origin such as meat, liver, kidney, fish, shrimp, eggs, plasma/serum, cattle/pork urine, pork/poultry feed Detectable antibiotic groups: ß-lactams, cephalosporins, macrolides, tetracyclines, sulphonamides, aminoglycosides, quinolones, polypeptides, amphenicoles, others	25 ampoules 4 x 25 ampoules Incubation time: 3 hrs	R3925 R3900
	Ampoules		
Premi®Test Urine 20	Additonal module for Premi®Test Pretreatment of plasma/serum or cattle/pork urine with this seperate module allows screening with Premi®Test	20 ampoules	R3920

* Further applications on request.

Phycotoxins

Product	Description	No. of Tests/Amount	Art. No.
	ELISA Microtiter Plates		
RIDASCREEN® FAST PSP SC	Enzymimmunoassay for quanitative analysis of saxitoxin and related algae toxins in mussels Detection limit: 50 ppb	48 determinations Incubation time: 30 min	R1905

Food Adulteration

	ELISA Microtiter Plates		
RIDASCREEN® CIS	Enzyme immunoassay for the analysis of cow's milk in sheep and goat's milk and cheese Detection limit: 0.1 % (cow's milk in sheep/goat´s milk/cheese)	48 determinations Incubation time: 1 hr 30 min	R4302
RIDASCREEN® GIS	Enzyme immunoassay for the detection of goat's milk in sheep's milk Detection limit: 1 %	48 determinations Incubation time: 1 hr 30 min	R4802
	Test Strips		
RIDA®QUICK CIS	Immunochromatographic test for the detection of cow's milk in milk or cheese of other species Detection limit: 0.5 % (cow's milk in sheep/goat's milk/cheese)	25 strips Incubation time: 5 min	R4303
DUROTEST® S	Membrane strips for detection of non-durum wheat adulteration in semolina	20 strips (80 determinations)	RBRP10
	Clean-up column		
MELAMINE CLEAN-UP COLUMN	Clean-up columns for analysis of dairy products and animal feed samples	25 columns	RBRP111