

# Antibiotic residue screening

Premi®Test – Microbial inhibition test for broad spectrum screening of food

- For meat, fish, shrimp, eggs and more food of animal origin
- Simple to perform
- Results in less than 4 hours



RBP 31/02 - 4/11  
ALTERNATIVE ANALYTICAL  
METHODS FOR AGRIBUSINESS  
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End of validity: 30.08.2018

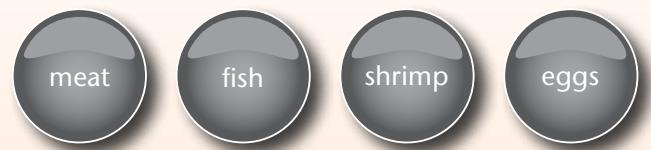


## Premi®Test offers easy and fast screening of antibiotic residues in food of animal origin

In livestock breeding, antibiotics are used for the treatment of bacterial infections and diseases. Additionally, antibiotics can illegally be used as antimicrobial growth promoters (AGP). As a consequence, antibiotic residues can remain in food of animal origin and bear a health risk for the consumers.

The Premi®Test antibiotic residue screening test detects a broad spectrum of the most veterinary used antibiotics in animal husbandry. The easy-to-implement and easy-to-use test enables on-site screening by farmers, slaughterhouses, meat-processors, fisheries etc. In contrast to conventional plate tests, reliable results are available in less than four hours.

Major applications are the analysis of:



Additional application protocols are available for: liver, kidney, cattle/pork urine and poultry/pork feed.

(For urine, Premi®Test Urine is required for pre-treatment)

## Test kits and equipment

Premi®Test is available as:



***Premi®Test 100***  
(Art. No. R3900):  
100 test ampoules

or

***Premi®Test 25***  
(Art. No. R3925):  
25 test ampoules



***Premi®Test Starter Kit***  
(ZPT-2000):  
Contains meatpress, incubator,  
timer, scissors and briefcase



***Multipress***  
(ZPT-2012):  
Allows to squeeze 12 samples  
at once



***Premi®Test Urine***  
(R3921):  
Reagent for pre-treatment of  
urine samples

## How to use Premi® Test for the detection of antibiotic residues in meat

### Test procedure



1 Cut off the required number of ampoules. Use one additional ampoule for the negative control, which is a sample containing no antibiotics.



2 Cut the meat into pieces of approx. 2 cm<sup>3</sup> and put one piece into the meatpress. Increase pressure slowly and hold constant until approx. 200 µl of meatjuice is obtained.



3 Pipette 100 µl of the meatjuice into the ampoule without distortion of the agar. The included syringe is designed to take-up automatically the required volume.



4 Incubate ampoules for 20 minutes at room temperature. Switch on the Premi® Test Incubator for temperature stabilization at 64 °C.



5 Wash the ampoules twice with demineralized water. Remove excessive water by turning the ampoules upside down on a piece of soaking paper, but do not tap the ampoules.



6 Close the ampoules with the supplied perforated foil.



7 Put the ampoules into the incubator at 64 °C.

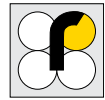


8 Read the results of the samples, when the negative control shows a clear colour change into yellow (approx. after 3 h).

### Determination of results

Compare the colour of the sample ampoules to the colour of the negative control ampoule. If the sample ampoules remain purple or if the colour deviates from the colour of the negative control ampoule, the sample potentially contains antibiotic residues and the results have to be verified by the official reference method.





## Premi® Test detection limits in different animal food products

Substances	Chicken	Pork	Beef	Eggs	Shrimp
<b>β-lactams</b>					
Amoxicillin	5	5	5	5	15
Ampicillin	5	5	5	5	
Penicillin-G	2.5	2.5	2.5	2.5	5
Cloxacillin		>100		100	
Oxacillin		100			
Dicloxacillin					
<b>Cephalosporins</b>					
Cefquinome	75	100	100		
Ceftiofur	100	200	100	400	
<b>Macrolides</b>					
Tylosin	50	25 - 50	50	50	
Erythromycin	100	100	100	50	100
Lincomycin	100	100	100		
Tilmicosin	50	50	50		
Spiramycin	1000	1000	1000		
<b>Tetracyclins</b>					
Chlortetracycline	100	100	100	600	1000
Oxytetracycline	100	100	100	400	100
Doxycycline	100	100	100	200	
Tetracycline		50		200	
Demeclocycline		50			
<b>Sulfonamides</b>					
Sulfamethazine	75	50-100	100	25	
Sulfadiazine	75	50-75	75	25	50
Sulfamethizole		50-100			
Sulfguanidine	<200	150	<200		
Sulfadimethoxine		25 - 50	<100		50
Sulfapyridine	<50	50	<100		
Sulfamethoxyipyridine	<100	25			
Sulfisoxazole	<100	25			
Sulfathiazole	<100	25			
Sulfachloropyridazine	<100	25			
Sulfamerazine	<100	25	<100		
Sulfanilamide	<100	150			
Sulfaquinoxaline	<100	50	<50		
Sulfametiozole	<100		<50		
Sulfamethoxazole				25	

Substances	Chicken	Pork	Beef	Eggs	Shrimp
<b>Aminoglycosides</b>					
Gentamicin	100	100	100	100	
Streptomycin	1500	1500	3000	1000	
Neomycine	300	300	300	300	200
Spectinomycine			5000		
<b>Chinolone</b>					
Oxolin acid					>10000
Enrofloxacin	>600	>600	>600		
Flumequine	>100	>100	>100		
<b>Polypeptide</b>					
Virginiamycin	500	500	500		
Bacitracin	500	500	500		
Zn-bacitracin	1250				
Colistin	>1000				
<b>Ionophores</b>					
Salinomycin	1000				
Monensin	1250				
Lasalocid	10000				
<b>Oligosaccharides</b>					
Avilamycin	>5000				
<b>Andere</b>					
Florfenicol	100	100	100		5000
Chloramphenicol	2500	2500	2500	2500	
Trimethoprim	50				
Narasin	1250				
Amprolium	>2000				
Phosphomycine	>1500				
Ronidazole					>5000
Furazolidone	>1500				

All detection limits are given in µg/kg = ppb.  
Detection limits for other matrices are available on request.