

Delvotest[®] SP

Test Sensitivity or Detection levels

Introduction

Delvotest[®] SP broad-spectrum antibiotic residue test system offers the possibility to verify the presence in milk of a multitude of different antimicrobial substances. Delvotest[®] SP may be used in milk quality payment programs. An indication of the sensitivity of the Delvotest[®] SP has been given in the Specification sheet of this product. However, apart from the specified sensitivities for Penicillin-G and Sulfadiazine, a substantial number of other antibiotics, sulfonamides and inhibitory substances can be detected at or close to the levels such as defined by the Maximum Residue Level (MRL). The table below shows an overview of the indicative detection levels of Delvotest[®] SP for different antibiotic residues.

Delvotest[®] SP indicative data on detection levels Delvotest[®] SP in ppb (parts per billion or ng/ml) in commingled raw cow's milk.

Drugs	Control time Time of negative control Colouring yellow	Fixed reading time Between 2 hours, 45 minutes and 3 hours
β-lactams		
Penicillin-G	2	2.5
Ampicillin	2-3	3-5
Amoxicillin	2	3-5
Cefacetril	20	20-40
Cefalexin	40-60	60-100
Cefalonium	5-10	10-25
Cefaperazon	40	60-100
Cefapirin	5	5-10
Ceftiofur	<50	50-70
Cloxacillin	15	15-25
Dicloxacillin	10	10-15
Oxacillin	5	10
Nafcillin	5	5-10
Sulphonamides		
Sulfadiazine	50	50-100
Sulfadimethoxine	50	50-100
Sulfamethazine	25	50-200
Sulfathiazole	50	50-150
Tetracyclines		
Tetracycline	100	200-600
Oxytetracycline	100	200-500
Chlortetracycline	100-150	200-600
Macrolides		
Erythromycin	50	100-250
Tylosin	10-20	30-100
Spiramycin	200	350-ns
Aminoglycosides		
Gentamycin	100-300	200-500
Neomycin	100-200	300-2000
Dihydrostreptomycin	300-500	1500-10000
Kanamycin	2500	7500-ns
Lincosamides		
Lincomycin	100	200-400
Others		
Chloramphenicol	2500	7500-10000
Trimethoprim	50	100-500
Dapsone	1	1-8

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The data indicated in the table are based upon readings judged as being yellow/purple to purple and are to be regarded as an indication. It is recommended to always confirm positive test results. Variations in incubation times and temperatures, operators and storage conditions may have an influence on the reading result found. Data in the table may be used for validation purposes.

Definitions

Drugs:	Active ingredient of cattle medication such as antibiotics and sulfonamides.
Spectrum:	An indication of the number of different active ingredients that can be detected by a given method at or below the required detection level.
Detection level:	The lowest concentration at which a drug is still detected by the test, especially at control time and reading time.
Control time:	Time at which the test agar containing the negative control sample has just changed to yellow. At this time the best sensitivity for the test system is obtained.
Fixed Reading time:	For use without the requirement of running a negative control sample a fixed reading time between 2 hours 45 minutes and 3 hours can be used. This may decrease the sensitivity for bacteriostatic drugs.
ns	Not sensitive, detection limit above 10000 ppb (ng/ml) (10 \square g/ml)

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