

Scope of application

- Wide scope of application to screen raw, pasteurized, dried milk and other food products for presence of antibiotic residues
- Surveillance/ risk assessment organized dairy farms

NOVEL FEATURES

- Semi-quantitative detection of β -Lactams, aminoglycosides, tetracycline's, macrolides, chloramphenicol and sulfa drugs at Codex / EU limits
- The developed assay is cost effective, robust, reproducible, sensitive, selective and reveal result in real time as compared to conventional techniques
- Validated with AOAC approved Charm 6602 Assay and ROSA
- Minimal false positive / negative results
- Consistency in color development with in 1hr:15min
- No interference of inhibitors other than antibiotic residues
- Stability of test kits upto 8 months under refrigeration
- Kit can be used for routine monitoring of antibiotic residues in raw milk, pasteurized milk and dried milk products at dairy farm, milk collection center, dairy reception dock and R&D institutions

PAPER STRIP PROTOCOL

Step-1 Add 250 μ L of solution-1 into the tube containing nutrient disc and vortex for 25 seconds.

Step-2 Take paper strip, dip it into the milk sample for 15 sec and insert into the tube containing reconstituted nutrient media.

Step-3 Incubate at 64 °C for 1 hr 15 min in dry block heater and observe for color change

Result interpretation: Appearance of blue color on paper strip indicates absence of antibiotic residues in milk while no color development indicates presence of antibiotic residues in milk at or above MRL.

Penicillin (LOD 4 ppb)



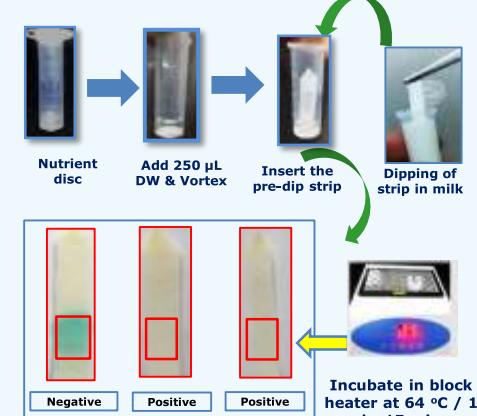
RESULT INTERPRETATION

CROSS REACTIVITY

No interference in presence of

- Detergents, Sanitizers & Preservatives
- AflatoxinM1, Pesticides & heavymetals

Paper Strip For Detection of Antibiotic Residues In Milk at "dairy Farm"

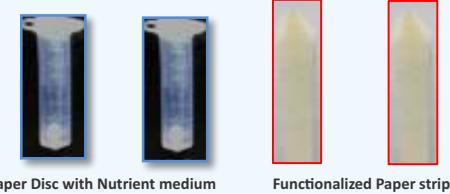


Result interpretation: Blue color indicates absence of antibiotics while no color indicates presence of antibiotics at or above MRL

Storage of kit components and their shelf stability

- The shelf stability of the test kit components is up to 8 months when stored at 2-8°C

KIT COMPONENTS



Paper disc containing nutrient medium and functionalized paper strips containing chromogenic substrate and bacterial spores in precise concentration.

Strips containing chromogenic substrates are vacuum packaged.

S.No	Antibiotic group	Antibiotics	*Codex / EU / USDA (ppb)	FSSAI * (ppb)	LOD (ppb)
1	Aminoglycosides	Gentamycin	*200	-	100 - 150
2		Apramycin	-	10	10 - 25
3		Kanamycin	150	-	150
4		Neomycin	*1500	1500	1000
5		Spectinomycin	*200	200	100 - 150
6		Novobiocin	50	-	< 50
7		Amikacin	-	-	100
8		Dihydrostreptomyycin	*200	*	150 - 200
		Streptomycin	*200	-	150 - 200
9	Bacitracin	Bacitracin	100	-	75 - 100
10	Amphenolics	Chloramphenicol	*Abs	*	< 0.3
11	Glycopeptide	Vancamycin	-	-	50 - 75
12	β -Lactam	Amoxicillin	*4	-	4
13		Ampicillin	*4	10	4 - 6
14		Oxacillin	30	-	<30
15		Cloxacillin	-	-	10
16		Penicillin / Benzyl - penicillin	*4	-	4
17		Cefotifur Sodium (Ceftiofur)	*100	100	100 - 125
18		Cefacetile	10	-	100
19		Cephalexin	100	-	50 - 100
20		Cephapirin	*10	-	10 - 20
21		Cephazolin	50	-	< 50
22		Cefotaxime	-	-	100
23		Carbenicillin	-	-	100
24		Ceftrioxone	-	-	100
25		Cephtazidine	-	-	100
26	Quinolone	Ciprofloxacin	*100	-	125
27		Enrofloxacin	*100	-	100 - 125
28	Ionophore Antibiotics	Monensin	*2	2	2
29	Lincosamides	Clindamycin	-	-	50
30		Lincomycin	150	150	150
31	Macrolides	Erythromycin	*40	-	30
32		Spiramycin	*200	-	200
33		Tylosin	*100	100	100
34	Polymixins	Aerosporine	-	-	100
35		Polymyxin B	-	-	125
36		Colistin	*50	*	50 - 100
37	Nitrofurans	Nitrofural	Abs	*	10
38	Rifamycins	Rifampin	-	-	125
39	Sulphona - mides	Sulphadiazine	-	10	75 - 100
40		Sulphamerazine	-	-	75 - 100
42		Sulphadimidine	*25	25	75 - 100
43		Sulphamethoxazole	-	*	50
44		Sulpha Chloropyrazine Sodium	-	10	75 - 100
45		Sulphaquinoxaline	-	10	75 - 100
46		Sulfanilamide	10	75 - 100	
47	Tetracycline	Tetracycline	*100	100	100
48		Oxytetracycline	*100	100	100
49		Doxycycline	-	-	100
50		Chlortetra - cycline	*100	100	100
51	Diaminopyrimidines	Trimethoprim	-	10	<50



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