

## Charm® Blue Yellow II Test for Antimicrobial Drugs in Milk



### Blue-Yellow II Sensitivity Levels (Partial List)

#### Concentration of Antimicrobial Drugs Detected in Milk (µg/kg)

Antimicrobial Drug*	Positive Concentration (µg/kg)	EU/CODEX MRL (µg/kg)
Amoxicillin	2 - 3	4
Ampicillin	2 - 3	4
Cefalexin	60 - 100	100
Cefalonium	10 - 15	20
Cefazolin	6 - 10	50
Cefoperazone	20 - 30	50
Cefuroxime	20 - 25	50
Ceftiofur †	50 - 100	100/100
Cephapirin	4 - 6	60
Cloxacillin	10 - 20	30
Dapsone	1 - 2	0
Dicloxacillin	10 - 20	30
Erythromycin	100 - 150	40
Gentamicin	75 - 100	100/200
Neomycin	75 - 150	500/1500
Oxacillin	8 - 10	30
Oxytetracycline	75 - 100	100/100
Penicillin G	2 - 3	4/4
Sulfadiazine	80 - 100	100
Sulfadimethoxine	50 - 75	100
Sulfamethazine	75 - 125	100/25
Tetracycline	75 - 100	100/100
Tylosin	20 - 30	50

\*Antimicrobial drugs listed are representative of their respective drug families. Other drugs will be detected at different levels.

†Concentrations listed are total parent and metabolites. The concentration for positive for parent ceftiofur only is 10 - 20 µg/kg or ppb.

## BlueYellowII

### Blue Yellow II TEST AT A GLANCE

Broad spectrum/high-volume throughput test for antibiotics

- ▶ Broad spectrum antibiotic inhibition test for the dairy industry
- ▶ Detect beta-lactams and other antimicrobial drugs near regulatory limits
- ▶ The most sensitive inhibition test for antimicrobial drugs in milk
- ▶ One-Step Test – just add milk
- ▶ Ideal for larger volume testing
- ▶ Multiple incubator options
- ▶ New optional color scanner available

### ABOUT Blue Yellow II

The Charm Blue Yellow II Test is a microbial inhibition assay, which detects inhibitors, such as antibiotics, in milk. Antibiotics are the most common inhibitors found in raw milk. The test consists of a single service well that contains pre-measured bacterial spores<sup>‡</sup>, media, and a pH indicator. Reagents are unit dosed and compartmentalized to ensure uniformity. This eliminates reagent transfer steps and prevents inadvertent contamination and reagent loss.

The new Charm® Blue Yellow II test has superior sensitivity to beta-lactams, sulfonamides, aminoglycosides and especially tetracyclines. Breakthrough sensitivity to tetracyclines makes it the first inhibition test to closely match EU MRL levels.

### HOW IT WORKS

The starting color in the well is blue. Milk is added to the microwell and incubated. Spores germinate and grow, generating acid, which is indicated by color change to yellow. If antibiotics are present in the milk, microbial growth is retarded and/or inhibited so that no acid is generated. Thus, antibiotic positive samples remain blue.

<sup>‡</sup>*Bacillus stearothermophilus var. calidolactis*

# Blue Yellow II Test Procedure

## Preparation

Adjust air incubator, dry well incubator or water bath to 64 °C and allow to stabilize (64±1 °C).



Remove wells from well holder, cut foil seal with scissors, and remove foil (one well per test).



Break apart into individual wells or use strips of 8 wells.



Pipet 50 µl milk sample to purple agar portion of well for each sample.



Apply clear sealing tape and press firmly to seal rim of each well.



Place wells into the incubator. Set timer to time specified on kit label (approximately 3 hours).

After incubation, remove wells from incubator and observe color in comparison to reference colors or (optional) scan for results



**Order Codes:** [MI-BY-II-192K]; [MI-BY-II-192NSK]

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