



Europa Bioproducts Ltd

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Bacstain-CTC Rapid Staining Kit

Item #	Unit Size
BS01-10	100 assays
BS02-10	100 assays

Contents of the Kit

BS01-10

CTC...10 mg x 3 vials Enhancing reagent A ... 100 µl x 1 vial

BS02-10

CTC...10 mg x 3 vials Enhancing reagent B ... 500 µl x 1 vial

Storage Condition: 0-5°C, protect from light

Shipping Condition: ambient temperature

Required Equipment and Materials

10 µl, 1000 µl pipettes, incubator, Microscope (blue excitation filter and red emission filter) or flow cytometer (488 nm blue laser)

Product Description

Colony formation using an agar plate is a very common and reliable method for counting bacterial cells. However, it takes quite a long time to form a colony. Therefore, alternative detection methods have been developed. Bacteria-specific gene amplification methods such as PCR, LAMP, and nucleus staining are quite rapid, but these methods count dead bacteria as well. Therefore, detection of live cell functions is essential to determining the actual number of living bacteria in a sample. Tetrazolium salts can be used to detect respiratory activity of bacterial cells or mitochondria.

CTC is a tetrazolium salt and is reduced by this respiratory activity to form fluorescent CTC formazan on the cell surface. Therefore, CTC is used for specific staining of aerobic live bacteria and can be applied to hard-to-culture bacteria (VNC: viable but non-culturable). CTC forms a fluorescent formazan by an electron transfer system. However, CTC alone is not sensitive enough to stain single cells. Therefore, the CTC-Rapid Staining Kit contains an enhancing reagent that improves the CTC staining efficiency. Compared with staining with CTC only, this staining kit enables rapid and sensitive staining of microorganisms. Maximum wavelengths of the CTC formazan dye are 430 nm or 480 nm for excitation and 630 nm for emission.



CERTIFICATE NO. 32423

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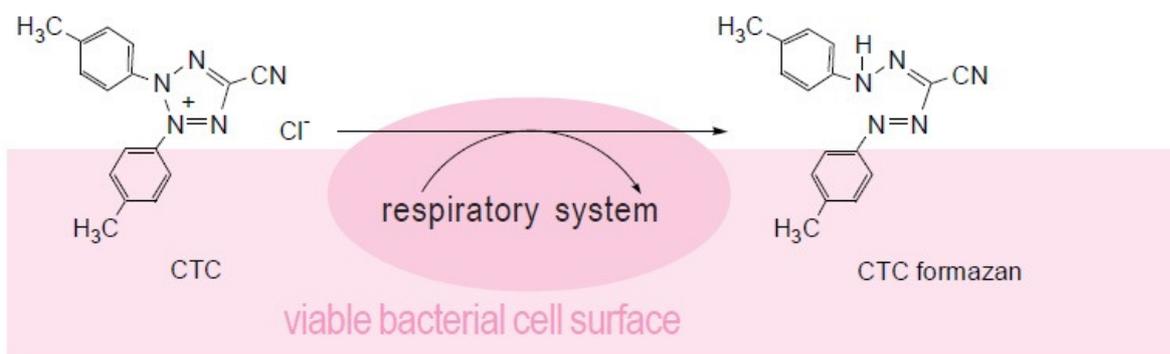


Fig. 1 Bacterial cell viability detection mechanism with CTC



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