

Rapid test in strip for the detection of beta-lactamase.

DESCRIPTION

BETA LACTAMASE TEST is a rapid test in strip for detecting the enzyme beta-lactamase which confers resistance to penicillins and cephalosporins in a wide variety of both Gram positive and Gram negative microorganisms.

KIT CONTENT

- 30 strips impregnated with a solution of Nitrocefin, phosphate buffer and dimethyl sulphoxide.
- Instructions sheet.

PRINCIPLE OF THE METHOD

Nitrocefin is a chromogenic cephalosporin (3-(2,4 dinitroethyl)-6R, 7R)-7-(2 thienylacetamido)-ceph-3-em-4 carboxylic acid, E-isomer) which rapidly turns from yellow to red as the amide bond in the beta-lactam ring is hydrolysed by beta-lactamases; it is sensitive to hydrolysis by all known lactamases produced by Gram positive and Gram negative microorganisms.

TEST PROCEDURE

- Remove the container from the freezer and bring to room temperature.
- Remove one strip from the container.
- Touch a well isolated colony from the primary isolation medium with a sterile loop and streak it onto the portion of the strip indicated by the arrows.
- Place the inoculated tip of the strip between the lid and the base of the inverted plate. The reaction requires moisture. It is therefore necessary to increase moisture inside the plate, or directly moisten the strip.

INTERPRETATION OF RESULTS

A positive reaction is shown by the development of a pink/ red colour. No colour change is observed with organisms that do not produce beta-lactamases. To ensure correct reading the colour of the strip should be compared to an unused strip.

Observe the result up to a maximum of 5 minutes and, if negative, observe again after 15 minutes. Some Staphylococci can take also 1 hour before determining a colour change.

QUALITY CONTROL

Microbiological control

Microorganism	Result	Reaction time
<i>Staphylococcus aureus</i> ATCC® 29213	+	1 h
<i>Haemophilus influenzae</i> ATCC® 35036	+	1 min
<i>Neisseria gonorrhoeae</i> ATCC® 31426	+	1 min
<i>Escherichia coli</i> ATCC® 25922	-	1 min

PRECAUTIONS

The BETA LACTAMASE TEST is not classified as hazardous by current legislation. BETA LACTAMASE TEST is disposable, designed for professional use and must be used in a laboratory by suitably trained operators using approved aseptic and safety methods for dealing with pathogenic agents.

STORAGE

Keep BETA LACTAMASE TEST at -20°C in their original packaging protected from sunlight. Keep them away from sources of heat. In these conditions, BETA LACTAMASE TEST are valid until the expiry date shown on the label. Do not use them beyond that date. Dispose of them if they show signs of deterioration (strip changes colour).

ELIMINATING USED MATERIAL

After use, BETA LACTAMASE TEST and the material that has come into contact with the sample must be decontaminated and disposed of in accordance with the laboratory procedures for the decontamination and disposal of potentially infected material.

BIBLIOGRAPHY

- O'Callaghan C.H., et al. (1972) Antimicrob. Ag. & Chemother. 1.283-288.
- Shannon K. and Phillips I. (1980) J. Antimicrob. Chemother. 6.617-621.

PRESENTATION

Product	Ref.	Tests
BETA LACTAMASE TEST	88033	30

TABLE OF SYMBOLS

LOT Batch code	 Do not reuse	 Manufacturer	 Content sufficient for <n> tests	 Temperature limits
REF Catalogue number	 Fragile, handle with care	 Use by	 Warning, see instructions for use	



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