
Product Name : Albert Color Kit

Kit for staining diphtheria *Corynebacteria*.

CONTENT OF THE PACKAGES

(The reagents are contained in glass bottles, sealed by thermo-induction and provided with a dropper top.)

Toluidine blue – Malachite green solution 100 mL

Lugol's solution 100 mL

1 Instruction sheet

DESCRIPTION

Albert Color Kit is a kit for staining diphtheria corynebacteria present in clinical samples or culture media. The stain reveals the granules of volutin present in *Corynebacterium diphtheriae* and other species of the genus *Corynebacterium*.

PRINCIPLE OF THE METHOD

Corynebacterium diphtheriae is the etiologic agent of diphtheria, an acute infection caused by the exotoxin produced by the bacterium. With the exception of *Corynebacterium diphtheriae* and some closely related species (*Corynebacterium ulcerans* and *Corynebacterium pseudotuberculosis*) which are markedly pathogenic, the other members of the genus can be considered as commensals of the respiratory tract and other mucosa (in man). *Corynebacterium diphtheriae* is distinguished by the presence in its cytoplasm of granules of volutin, concentrated around the poles of the corynebacterium. Following incubation on a Loeffler serum medium, one obtains colonies of *Corynebacterium diphtheriae* with toothed margins. When ALBERT's stain is applied to these cultures or to clinical samples, it highlights the granules of volutin, which turn black, whereas the cytoplasm of the micro-organism is stained green.

COLLECTION OF SAMPLES

Samples to be subjected to Albert's staining are predominantly clinical material and microbial cultures.

TEST PROCEDURE

Preparation and fixing

Using clean slides, make a smear of the culture or pathological material. Leave to dry in the air and fix by heat, by a quick pass over the flame. Other fixing methods can be used.

Staining

1. Cover the slide with the toluidine blue – malachite green solution. Leave in contact for 3-5 minutes, rinse delicately with water and dry with blotting paper.
2. Cover the slide with Lugol's solution. Leave in contact for 1 minute. Rinse delicately with water and dry with blotting paper.
3. Observe the slide under the microscope using an immersion objective.

INTERPRETATION OF THE RESULTS

Corynebacterium diphtheriae grown on a serum medium, such as Loeffler's, or present in appropriately taken clinical samples, is seen as a thin straight or slightly curved bacillus with the cytoplasm stained green and the granules of volutin, concentrated near the two poles, stained black.

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QUALITY CONTROL

Each batch of Albert Color Kit is subjected to quality control using a culture of *Corynebacterium diphtheriae* ATCC 27010 as positive control.

LIMITS

The identification of *Corynebacterium diphtheriae* must be confirmed by further tests.

PRECAUTIONS

The kit of Albert Color Kit does not contain substances classified as dangerous under current legislation. Albert Color Kit is a kit for staining bacteria, to be used only for in vitro diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel using approved asepsis and safety methods for handling pathogenic agents.

CONSERVATION

Store Albert Color Kit at 10-25 °C in the original packaging. In such conditions the product will remain valid until the expiry date indicated on the label. Do not use beyond that date. Eliminate without using if there are signs of deterioration (changes in the colour of the solutions or presence of substantial precipitates).

DISPOSAL OF USED MATERIAL

After use, the slides stained with Albert Color Kit and material that has come into contact with the sample must be decontaminated and disposed of in accordance with the techniques used in the laboratory for decontamination and disposal of potentially infected material.

REFERENCES

1. Laybourn, R. L. 1924. A modification of Albert's stain for the diphteria bacilli. *J.Am.Med.Assoc.*, 83,121.
2. Albert, Henry. 1920. Diphteria bacillus stains with a description of a new one. *Am. J. Public Health.*, 10, 334-337.

PACKAGING

Cat. No : MB-80294 Albert Color Kit	2 x 100 mL
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