

Nitrate Test

Kit used for the identification and determination of reduction from nitrate to nitrite by some bacteria.

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Nitrate Test Mixture	30 tubes
Sulphanilic Acid Reagent	3 mL
α -Naphthylamine Reagent	3 mL
Zinc Powder	0.5 g
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Storage condition : Store at 2 - 6°C / RT (Sulphanilic Acid Reagent, Zinc Powder)

• PROCEDURE

1. Take the tubes from the refrigerator and leave it for a few minutes on the bench until it has reached room temperature.
2. Inoculate well isolated colonies from fresh culture medium using a sterile loop.
3. Incubate at $36 \pm 1^\circ\text{C}$ for 2 - 18 hours up to 24 hours.
4. After incubation, add 2 - 3 drops of Sulphanilic Acid Reagent and 2 - 3 drops of α -Naphthylamine Reagent. Shake gently and await some seconds.
5. Observe the development of red-orange color. (Positive reaction)
6. In case of negative reaction add a small quantity of zinc powder and observe the eventual development of the red color.

• INTERPRETATION

Nitrate Test is a kit used for the identification and determination of reduction from nitrate to nitrite by some bacteria. The tubes contain a proteinic substrate and potassium nitrate, which is a substrate reduced to nitrite by some bacteria. Such reaction is used for the biochemical identification of bacteria. The nitrate reduction is detected by the addition of reagents which detect the presence of nitrite through the formation of a red-orange color in the test tube.

• QUALITY CONTROL FOR USE

Appearance : Nitrate Test - clear
 Sulphanilic Acid Reagent - clear
 α -Naphthylamine Reagent - clear
 Zinc Powder - free-flowing, homogeneous

Color : Nitrate Test - beige
 Sulphanilic Acid Reagent - colorless
 α -Naphthylamine Reagent - light pink
 Zinc Powder - gray

Incubation conditions : $36 \pm 1^\circ\text{C}$ / 2 - 18 hours up to 24 hours



None *E.coli* *S.typ* *L.mon* *L.mon*
+ Zn Powder

Microorganism	ATCC	Growth	Nitrate Reduction
<i>Escherichia coli</i>	25922	good	+
<i>Salmonella typhimurium</i>	14028	good	+
<i>Listeria monocytogenes</i>	15313	good	-

• STORE

Store the kit at 2 - 6°C / RT (Sulphanilic Acid Reagent, Zinc Powder) in its original package tightly closed and use it before the expiry date on the label. Keep away from sources of heat and avoid excessive changes of temperature.

• REFERENCES

1. MacFaddin 1980. Biochemical tests for the identification of medical bacteria, 2nd ed. Williams & Wilkins, Baltimore.
2. Kelly, Brenner and Farmer. 1985. In Lennette, Balows, Hausler and Shadomy (ed.), Manual of clinical microbiology, 4th ed. ASM, Washington, D.C.

• PACKAGE

Cat. No : MB-88009 Nitrate Test	30 tubes 3 mL reagent × 2ea 0.5 g powder × 1ea
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