Also known as
CN Pseudomonas Agar; CN Medium; Cetrimide-Nalidixic Acid Medium

**Specification**
Selective solid medium used for the detection of *Pseudomonas aeruginosa* according to the EN 12780-2002 and ISO 16266 standard.

**Formula* in g/L**
- Gelatin peptone ...................................................... 16.00
- Casein peptone .......................................................... 10.00
- Potassium sulfate ...................................................... 10.00
- Magnesium chloride ................................................... 1.40
- Cetyltrimethyl-ammonium bromide .................................. 0.20
- Agar ........................................................................ 15.00

Final pH 7.1 ± 0.2 at 25°C
* Adjusted and/or supplemented as required to meet performance criteria

**Directions**
Add 52.6 g of powder to 1 L of distilled water with 10 mL of glycerol. Heat until completely dissolved. Dispense in suitable containers and sterilize in the autoclave at 121°C for 15 min. Cool to 45-50°C and to each 500 mL of medium add a vial of the Nalidixic Acid Selective Supplement (Art. No. 06-124CASE or 06-124-LYO). Mix well and pour into Petri dishes.

**Do not allow the medium to remain in the molten state for more than 4 hours. Do not re-melt.** The finished plates can be used without losing efficacy. For up to one month if they are refrigerated and kept in the dark.

**Description**
The CN Selective Medium for Pseudomonas was progressively developed from the basic medium of King, Ward and Raney for the enhanced production of pigments. Browne and Lowbury added cetrimide as a selective agent and Goto and Enomoto improved the selectivity by adding nalidixic acid. The presence of both inhibitors eliminates the contaminating microbiota from heavily polluted specimens and was adopted by the CEN (Centre Europeen de Normalisation) in its EN Standard 12780 for the detection of *P. aeruginosa* by membrane filtration of water.

**Technique**
A volume of the sample is passed through a filter membrane of 0.45 μm pore and the membrane is then placed on the surface of the CN medium. The plates are incubated at 36 ± 2°C for a period of 44 ± 4 hours with a partial examination at 22 ± 2 hours.

All colonies producing a green or blue (pyocyanin) pigmentation in this period may be considered *Pseudomonas aeruginosa* and do not require further conformational testing.

All colonies that produce fluorescence under the Wood’s light (without pyocyanin production) are considered presumptive *P. aeruginosa* but must be confirmed on Acetamide Medium (Art. No. 03-428).

All colonies producing a brown-reddish pigment and have no fluorescence or pyocyanine are also considered presumptive *P. aeruginosa* and must be confirmed by the oxidase test and by typical growth on Acetamide Medium (Art. No. 03-428) and King B Agar (F Agar Art. No. 01-029).

**Necessary supplements**
Nalidixic Acid Selective Supplement (Art. No. 06-124CASE / 06-124-LYO)
Vial Contents:
- Necessary amount for 500 mL of complete medium.
- Nalidixic acid, sodium salt ............................................. 7.50 mg
- Distilled water (Solvent)

**References**

**Storage**
For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4°C to 30°C and <60% RH).
## Quality control

**Incubation temperature:** 35°C ± 2.0

**Incubation time:** 24 - 48 h

**Inoculum:** 10-100 CFU (Productivity) // 1,000-10,000 CFU (Selectivity). Membrane Filter Method

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Growth</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Escherichia coli ATCC 8739</td>
<td>Inhibited</td>
<td>-</td>
</tr>
<tr>
<td>Staphylococcus aureus ATCC 6538</td>
<td>Inhibited</td>
<td>-</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa ATCC 27853</td>
<td>Productivity &gt; 0.50</td>
<td>-</td>
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<tr>
<td>Pseudomonas aeruginosa ATCC 15442</td>
<td>Productivity &gt; 0.50</td>
<td>-</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa ATCC 9027</td>
<td>Productivity &gt; 0.50</td>
<td>-</td>
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</tbody>
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![Pseudomonas aeruginosa ATCC 27853](image1)

![Pseudomonas aeruginosa ATCC 15442](image2)

![Pseudomonas aeruginosa ATCC 9027](image3)