

TECHNICAL DATA SHEET

CETRIMIDE AGAR PLATES

P90/CET 3G - 20

INTENDED USE

Recommended for selective isolation of *Pseudomonas aeruginosa* from clinical specimens.

TYPES OF SAMPLE

- Clinical

PRINCIPLE

Cetrimide Agar is a selective medium used for the isolation of *Pseudomonas aeruginosa* from clinical specimens. Cetrimide, a quaternary ammonium compound, acts as a cationic detergent that disrupts bacterial cell membranes by releasing nitrogen and phosphorus, inhibiting the growth of most bacteria except *P. aeruginosa*, which is resistant to its germicidal effects.

P. aeruginosa is identified by its production of pyocyanin, a blue, water-soluble phenazine pigment, and its characteristic grape-like odor due to aminoacetophenone. It is the only known gram-negative rod that excretes pyocyanin. The organism also produces pyoverdinin (fluorescein), a yellow-green, fluorescent pigment. The combination of pyocyanin and pyoverdinin imparts a bright green coloration to colonies.

Medium Components and Functions:

- Cetrimide: Selective agent; enhances pigment production.
- Gelatin peptone: Nutrient source.
- Sodium chloride: Maintains osmotic balance.
- Magnesium chloride & Potassium sulfate: Stimulate pyocyanin production.
- Glycerol: Carbon source.
- Agar: Solidifying agent.

INGREDIENTS

Approximate Formula Per Liter	
Gelatin peptone	20.0 g



Magnesium chloride	1.4 g
Potassium sulfate	10.0 g
Cetrimide	0.3 g
Glycerol	10.0 ml
Agar	13.6 g
Final pH 7.2 ± 0.2 at 25°C	

PHYSICAL PARAMETERS OF PREPARED PLATES

- Appearance: 90 mm petri plates with a smooth surface and absence of any particles, cracks, or bubbles.
- Colour: Light Amber
- Clarity: Slightly Opalescent

STERILITY CHECK

Sterility of the plates is checked by incubating the plates at 30-35°C for 2 days.

MICROBIAL PERFORMANCE DATA

Culture characteristics observed after inoculating 50-100 CFU and incubate at 30-35°C for 24-48 hours.

Test Strains	ATCC No.	Inoculum	Growth
<i>Pseudomonas aeruginosa</i>	ATCC 27853	50-100 CFU	Luxuriant
<i>Escherichia coli</i>	ATCC 25922	$\geq 10^3$ CFU	Inhibited
<i>Staphylococcus aureus</i>	ATCC 25923	$\geq 10^3$ CFU	Inhibited
<i>Proteus mirabilis</i>	ATCC 29906	$\geq 10^3$ CFU	Inhibited
<i>Salmonella typhimurium</i>	ATCC 14028	$\geq 10^3$ CFU	Inhibited

LIMITATIONS & COMPLEMENTARY TESTS

- Additional testing such as biochemical tests and serological procedures should be performed to confirm the findings and to confirm a diagnosis of *P. aeruginosa*.

PRECAUTIONS

- For in-Vitro diagnostic use. Read the label details and storage before opening the pack.
- Wear protective gloves / protective clothing / eye protection / face protection.
- Follow good microbiological lab practices while handling specimens and culture.

PACK SIZE AND PACKAGING

20 plates per kit packed with gamma irradiated packing material.

STORAGE & SHELF LIFE

- Store at 10 -15 °C.
- Use before the expiry date mentioned on the label.
- Product is temperature sensitive; protect from direct sunlight, excessive heat, moisture, and freezing.

DISPOSAL

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Materials that have come in contact with infectious / clinical samples must be decontaminated and disposed of in accordance with current laboratory techniques and regulations.