

# Cetrimide Biosart® 100 Nutrient Media



## Introduction

Cetrimide Biosart® 100 Nutrient Media is used for the detection and enumeration of *Pseudomonas aeruginosa* according to Lowbury. The culture medium is intended for cultivating microorganisms in cosmetics, raw materials, water (general quality), wastewater, foods, and other products.

*Pseudomonas aeruginosa* is known for synthesizing a range of pigments, primarily the blue-green pyocyanin and yellow fluorescent fluorescein.

Less frequently, it also produces pigments such as black-brown pyomelanin and red pyorubin. Cetrimide as a quaternary ammonium salt, impacts bacterial membrane proteins and thus inhibits the growth of various microorganisms, while *Pseudomonas aeruginosa* can grow with a typical morphology.

## Technical Specifications

<b>Order No.</b>	16400-02----CE-K (50 units)
<b>Media</b>	Cetrimide
<b>Color</b>	Transparent
<b>Storage</b>	Refrigerate (2 - 8 °C) after arrival*, dark and dry, use before expiry date on the label
<b>Shelf Life</b>	12 months
<b>For Use With</b>	Biosart® 100 Monitor (16401) with white membrane filter and black grid, 0.45 µm

\* Data have shown constant performance in microbiological tests after storage at 22 °C for 14 days.

## Media Formulation\*\*

Ingredients	g/L
Peptone from gelatine	20
Magnesium chloride	1.4
Potassium sulfate	10
Glycerin	10 mL
Cetrimide	0.3
Water (AP-Quality)	Ad 1,000 mL

pH 7.3 ± 0.25 (at room temperature)

\*\* Formula adjusted, standardized to suit performance parameters.

## Instructions

The Biosart® 100 Monitor is a sterile, ready-to-use disposable unit featuring an integrated membrane filter and cellulose pad. After filtration, add the Biosart® 100 Nutrient Media from the ampoule and apply vacuum for 1 second. Remove the disposable unit from the manifold and seal the outlet. Finally, detach the funnel and close the lid to transform the monitor into a petri dish.

### Incubation Conditions

40 – 48 hours at 30 - 35 °C.

### Evaluation and Typical Results

*Pseudomonas aeruginosa* forms blue, blue-green, or yellow-green colonies with a 1 – 2 mm diameter and blue zones. The colonies produce pyocyanin and fluorescein and show fluorescence under UV-light. Other Pseudomonads develop colonies with different colors.

## Microbiological Quality Control

### Sterility: Qualitative

Incubation conditions: 14 days at 30 - 35 °C

Specification: No growth or turbidity

### Productivity: Quantitative

Incubation conditions: 40 – 48 hours at 30 - 35 °C

Specification: ≥ 85% membrane filtration on control agar as reference

Microorganism	Test strain	Specification	Morphology
<i>Pseudomonas aeruginosa</i>	WDCM 00026	$P_R \geq 0.85$	Blue-green to beige colonies, green-blue zones fluorescence under UV-light (360 ± 20 nm) after 24 and 48 hours
<i>Pseudomonas aeruginosa</i> ***	WDCM 00025	$P_R \geq 0.85$	Blue-green to beige colonies, green-blue zones fluorescence under UV-light (360 ± 20 nm) after 24 and 48 hours

\*\*\* Tested on a regular basis.

$P_R$  Productivity Ratio

### Selectivity: Qualitative

Inoculum: 10<sup>4</sup> CFU

Specification: No growth | total inhibition

Microorganism	Test strain	Specification
<i>Brevundimonas diminuta</i>	DSM 1635	No growth   total inhibition
<i>Staphylococcus aureus</i> ***	WDCM 00032	No growth   total inhibition
<i>Proteus mirabilis</i> ***	WDCM 00023	No growth   total inhibition

\*\*\* Tested on a regular basis.

### Specificity: Qualitative

Inoculum: 10<sup>3</sup> CFU

TSA spread plate as control

Microorganism	Test strain	Specification   Morphology
<i>Escherichia coli</i>	WDCM 00012	Beige colonies, no fluorescence, no growth on specific control medium possible due to different formulation


The incubation conditions recommended by Sartorius can be adjusted based on the type of samples, in accordance with the reference standards or customer requirements. Descriptions of typical results illustrate the usual appearance of the specified microorganisms. However, in certain cases, the color and shape of the colonies may differ from the expected appearance. Additional tests may be required to confirm the results. Sartorius shall not be liable for any consequential or incidental damages incurred by customers from the use of its products.

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