



Milliflex® Growth Media Selection Guide



Bacterial Selective

Cetrimide Agar	Cetrimide Agar with Naladixic Acid	KF Strep Agar	MacConkey Agar	m-Endo LES Agar	Pseudomonas Isolation Agar (PIA)	
Catalogue Number	MXSMCET48	MXSMCET24	MXSMKFS48	MXSMCMC2	MXSMEND48	MXSMPIA48
Application	Isolation and identification of <i>Pseudomonas aeruginosa</i> found in various types of water.	The combination of cetrimide with sodium nalidixate improves the recovery of <i>Pseudomonas aeruginosa</i> and inhibits growth of <i>Klebsiella</i> , <i>Proteus</i> , and <i>Providencia</i> species.	Designed for the recovery of Enterococci found in various types of water.	For the selective isolation, cultivation and differentiation of lactose from non-lactose fermenting Gram negative enteric bacteria. It can also be used in examining water for coliforms.	Used to detect total coliform population in water.	Selective medium for isolating <i>Pseudomonas</i> species from water samples. It is also differential for <i>P. aeruginosa</i> by allowing formation of soluble blue-green pyocyanin pigment.
Incubation Time & Temperature	Harmonized EP/USP: 18 - 72 h at 30 - 35°C	ISO: 48 h at 37°C	18 - 72 h at 30 - 35°C	Standard Methods: 24 +/- 2 h at 35°C Harmonized EP/USP: 18 - 72 h at 30 - 35°C	Standard Methods: 22 - 24 h at 35°C	18 - 72 h at 35°C
Typical Colony Appearance	<i>P. aeruginosa</i> appear as green to blue colonies with fluorescence under UV wavelength.	<i>P. aeruginosa</i> appear as green to blue colonies with fluorescence under UV wavelength.	Enterococci colonies appear red or pink.	Lactose fermenting organisms will appear red. Non-lactose fermenters will appear colorless to white or yellow.	Coliform colonies appear deep reddish with distinct green metallic sheen.	Most <i>Pseudomonas aeruginosa</i> will produce blue to green colonies.
pH at 25 °C	7.2 ± 0.2	7.1 ± 0.2	7.2 ± 0.2	7.1 ± 0.2	7.2 ± 0.2	7.0 ± 0.2

Total Viable Organism/Total Viable Count

Heterotrophic Plate Count (HPC) Agar	Plate Count Agar	R2A	Tryptic Soy Agar (TSA)	Tryptic Soy Agar with Polysorbate 80 and Lecithin	Tryptone Glucose Extract Agar	
Catalogue Number	MXSMHPC48	MXSMPCA48	MXSMCRA48	MXSMCTSA48	MXSMPLP48	MXSMTGE48
Application	Used for the recovery of heterotrophic plate count bacteria found in various types of water, especially high purity water and treated potable water. It is also suitable for other water samples with low counts.	Designed for total microbial count in water and other samples.	This low nutrient agar is used for the recovery of stressed heterotrophic plate count bacteria found in various types of water.	Used for the recovery of a broad range of fastidious, heterotrophic microorganisms such as common aerobic and facultative anaerobic bacteria found in various types of water.	Used for determining the efficiency of the sanitation of containers, equipment and surfaces as well as for water miscible cosmetic products. It contains two commonly used neutralizers: Lecithin and Polysorbate 80.	Used for the recovery of microorganisms in water, wastewater and dairy products.
Incubation Time & Temperature	48 - 72 h at 30 - 35 °C	48 - 72 h at 30 - 35 °C	Standard Methods: 5 - 7 days at 20 - 28°C EP: Not less than 5 days at 30 - 35°C	Harmonized EP/USP: 3 - 5 days at 30 - 35°C	18 - 72 h at 35°C	18 - 120 h at 20 - 35°C
Typical Colony Appearance	Clear to white colonies; some may produce pigment.	Clear to white colonies; some may produce pigment.	Clear to white colonies; some may produce pigment.	Clear to white colonies; some may produce pigment.	Clear to creamy white colonies; some may produce pigment.	Clear to creamy white colonies; some may produce pigment.
pH at 25 °C	7.1 ± 0.2	7.0 ± 0.2	7.2 ± 0.2	7.3 ± 0.2	7.3 ± 0.2	7.0 ± 0.2

Yeast and Mold

Sabouraud Dextrose Agar	Sabouraud Dextrose Agar with Chloramphenicol	
Catalogue Number	MXSMCSD48	MXSMCSP48
Application	Designed for the recovery of a broad range of fungi (yeast and mold) found in various types of water. Some fungi may be inhibited by the acidic pH of the medium.	Designed for the recovery of a broad range of fungi (yeast and mold) found in various types of water. Chloramphenicol will inhibit most bacteria.
Incubation Time & Temperature	Harmonized EP/USP: 5 - 7 days at 20 - 25°C	5 - 7 days at 20 - 25°C
Typical Colony Appearance	Yeast produces white colonies with creamy texture. Mold colonies are rough textured and/or filamentous. Bacteria capable of growth produce clear to white colonies.	Yeast produces white, creamy colonies. Mold colonies are rough textured and/or filamentous.
pH at 25 °C	5.6 ± 0.2	5.6 ± 0.2

KEY
 USP United States Pharmacopoeia
 EP European Pharmacopoeia
 Standard Methods Standard Methods for the Examination of Water and Waste Water
 ISO International Organization for Standardization

NOTE
 • Suspect colonies should be verified using identification methods.
 • Agar is pre-poured into Milliflex® agar cassettes and used with the Milliflex® System.

Certificates of quality are available on www.merckmillipore.com
 Simply type the catalogue number in the search bar.

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 Lit. No. PF4459EN00 w286198 09/2015 Job No. BM-15-11850
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