



MacConkey-NPS

Version: 11/2022
M&S Item numbers: 1098 (50 / PK) und 1098-H (100 / PK)
Profile: Dehydrated nutrient pad sets 50 mm in petri dishes, sterile
Color: Reddish
Storage: Dark and dry at room temperature
Shelf life: 1 year after sterilization

Description and application range

MacConkey-NPS are used for the detection and isolation of coliform bacteria in waste water, food and biological specimens. The formulation according MacConkey (1905) is slightly selective and corresponds to the medium recommended by the World Health Organization (1963) for the bacteriological examination of drinking water. Gram positive bacteria are inhibited by bile salts and crystal violet, whereas gram-negative organisms show good growth. Bacteria that are able to metabolize lactose grow in rose or red colored colonies due to their ability of forming acid and the pH indicator neutral red. Bacteria not metabolizing lactose will grow colorless. The medium is manufactured and quality tested in compliance with ISO 11133:2014 + Amd 2:2020 standard.

Typical composition

Enzymatic digest of casein	20.0 g/l
Lactose	10.0 g/l
Sodium chloride	5.0 g/l
Bile salts	1.5 g/l
Neutral red	0.03 g/l
Crystal violet	0.001 g/l

Final pH: 7.2 ± 0.2 at 25 °C

Microbiological quality control

Bacterial contamination

Incubation: aerobically at room temperature for 3 days, specification: no growth

Productivity quantitative analysis

Incubation: aerobically at 36 ± 2 °C for 21 ± 3 h, approx. inoculum: 50 – 120 CFU

Microorganism	Test strain	Specification	Appearance
<i>Escherichia coli</i>	WDCM 00012	$P_R \geq 0.5$	Reddish colonies
<i>Klebsiella aerogenes</i>	WDCM 00175	$P_R \geq 0.5$	Rose colonies
<i>Enterobacter cloacae</i>	WDCM 00083	$P_R \geq 0.5$	Rose colonies
<i>Citrobacter freundii</i>	DSM 30039	$P_R \geq 0.5$	Yellowish colonies



P_R productivity rate (recovery rate)

Selectivity qualitative analysis

Incubation: aerobically at 36 ± 2 °C for 21 ± 3 h, approx. inoculum: 10,000 – 1,000,000 CFU

Microorganism	Test strain	Specification	Appearance
<i>Enterococcus faecalis</i>	WDCM 00009	Partial inhibition	Partially inhibited
<i>Staphylococcus aureus</i>	WDCM 00034	Inhibition	Inhibited

Specificity qualitative analysis

Incubation: aerobically at 36 ± 2 °C for 21 ± 3 h, approx. inoculum: 50 – 120 CFU

Microorganism	Test strain	Specification	Appearance
<i>Pseudomonas aeruginosa</i>	WDCM 00024	Growth	Greenish colonies