



## ECD MUG-NPS

Version: 11/2022  
M&S Item numbers: 1080 (50 / PK) und 1080-H (100 / PK)  
Profile: Dehydrated nutrient pad sets 50 mm in petri dishes, sterile  
Color: Beige  
Storage: Dark and dry at room temperature  
Shelf life: 2 years after sterilization

### Description and application range

ECD MUG-NPS are used for selective and quantitative direct detection of *Escherichia coli* from water, food and other samples according to SLMB (Schweizerisches Lebensmittelbuch). *E. coli* is able to cleave MUG with its  $\beta$ -Glucuronidase, which leads to the fluorescing 4-MU. For this reason *E. coli* colonies can be detected under UV-light (366 nm). For further confirmation the membrane filter is then placed on Indol reagent, giving pink *E. coli* colonies after 1 – 2 minutes. 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	5.0 g/l
Sodium chloride	5.0 g/l
Di-Sodiumhydrogenphosphate	4.0 g/l
Sodiumdihydrogenphosphate	1.5 g/l
Bile salts	1.5 g/l
Tryptophan	1.0 g/l
MUG (4-Methylumbelliferyl- $\beta$ -D-glucuronide)	0.1 g/l

Final pH: 7.0  $\pm$  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 44  $\pm$  0.5 °C for 48 h, approx. inoculum: 50 – 120 CFU

Microorganism	Test strain	Specification	Appearance
<i>Escherichia coli</i>	WDCM 00179	$P_R \geq 0.5$	Fluorescence under UV light (366 nm) pink, with Indol reagent
<i>Klebsiella aerogenes</i>	WDCM 00175	$P_R \geq 0.5$	Pale, no fluorescence, no color change

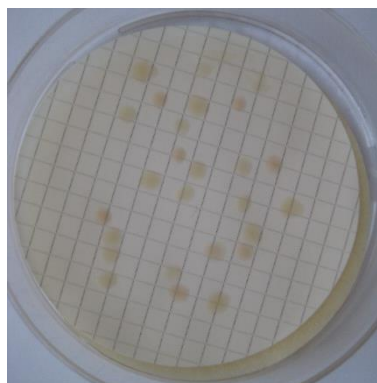
$P_R$  productivity rate (recovery rate)



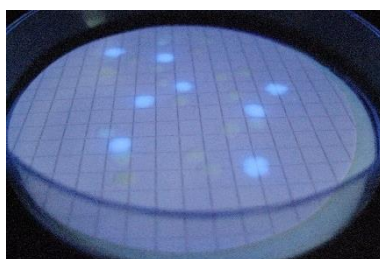
**Selectivity** qualitative analysis

Incubation: aerobically at  $44 \pm 0.5$  °C for 48 h, approx. inoculum: 10,000 – 1,000,000 CFU

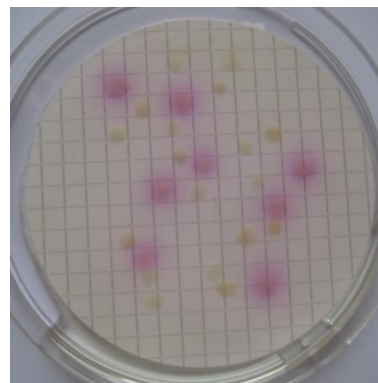
Microorganism	Test strain	Specification	Appearance
<i>Enterococcus faecalis</i>	WDCM 00009	Full inhibition	Fully inhibited



Mixed culture after 18 hours



*E. coli* fluoresces under UV-light



*E. coli* is pink with Indol reagent