



## Beer-NPS

Version: 11/2022  
M&S Item numbers: 1020 (50 / PK) und 1020-H (100 / PK)  
Profile: Dehydrated nutrient pad sets 50 mm in petri dishes, sterile  
Color: Green  
Storage: Dark and dry at room temperature  
Shelf life: 2 years after sterilization

### Description and application range

Beer-NPS are used for the detection of Beer-spoiling microorganisms e.g. Lactobacillus, Pediococcus and Zymomonas. The formulation is according to Konzulis and Page (1968). The formulation of the Beer-NPS provides a complex N-source from peptone and yeast extract to the microorganisms. Dextrose and Lactose are used as C-source. Beer and tomato juice enhances the growth of the target organisms. The low pH-value inhibits the development of bacteria except those of acid formers. The growth of yeasts and molds is inhibited by Actidione (Cycloheximide). Bromocresolgreen shows microbial activities by a color change from green to yellow. The medium is manufactured and quality tested in compliance with ISO 11133:2014 + Amd. 2:2020 standard.

### Typical composition

Enzymatic digest of casein	7.5 g/l
Yeast extract	6.1 g/l
Dextrose	16.0 g/l
Lactose	5.0 g/l
Potassiumdihydrogenphosphate	0.31 g/l
Sodium chloride	0.006 g/l
Ferric sulfate	0.006 g/l
Manganese sulfate	0.006 g/l
L-Cysteinhydrochloride	0.05 g/l
Beer	250 ml/l
Tomato juice	500 ml/l
Tween 80	0.2 ml/l
Bromocresolgreen	0.02 g/l
Actidione (Cycloheximide)	0.004 g/l

Final pH: 5.5 ± 0.2 at 25 °C

### Microbiological quality control

#### Bacterial contamination

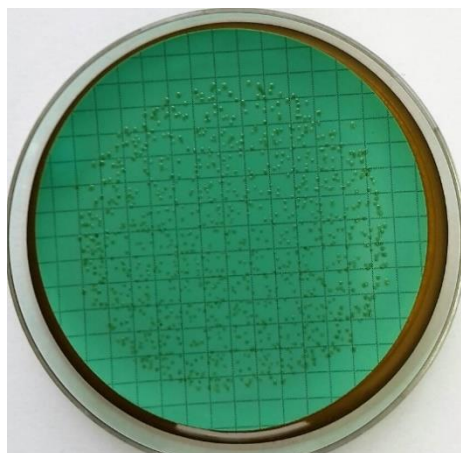
Incubation: aerobically at room temperature for 3 days, specification: no growth

**Productivity** quantitative analysis

Incubation: microaerophilic at  $30 \pm 1$  °C for  $72 \pm 4$  h, approx. inoculum: 50 – 120 CFU

Microorganism	Test strain	Specification	Appearance
<i>Lactobacillus sakei</i>	DSM 20017	$P_R \geq 0.5$	Greenish colonies
<i>Lactobacillus lactis</i>	DSM 20481	$P_R \geq 0.5$	Green colonies
<i>Pediococcus damnosus</i>	WDCM 00022	$P_R \geq 0.5$	Yellow-green colonies
<i>Pediococcus pentosaceus</i>	WDCM 00158	$P_R \geq 0.5$	Green colonies
<i>Leuconostoc pseudomesent.</i>	DSM 20193	$P_R \geq 0.5$	Green colonies
<i>Saccharomyces cerevisiae</i>	DSM 70449	No growth	No growth

$P_R$  productivity rate (recovery rate)



*L. sakei*, membran filtration, 72 h at 30°C microaerophilic