

Diastaticus-Broth with Indicator

Version: 05/2019
M&S item number: 4029 (25 tests); 4029-100 (100 tests)
Profile: Glass tubes with Durham tubes
Color: Turquoise with starch layer on bottom
Storage: Dark and dry at room temperature
Shelf life: 6 months

Description and application range

Diastaticus Broth with indicator is used for enrichment and detection of beer-spoiling yeast *Saccharomyces cerevisiae* var. *diastaticus* for all kinds of samples during brewing process and for quality control of end products.

The nutrient formulation of the broth especially promotes the growth of this yeast because of its ability to metabolize starch. *Saccharomyces cerevisiae* culture yeasts are inhibited due to not having this ability. Copper sulphate inhibits the growth of bacteria.

The indicator facilitates the detection of *S. diastaticus* yeast by color changing from turquoise to greenish in 3-7 days depending on the yeast amount. *S. diastaticus* needs some time for enrichment and start metabolizing the starch. During the advanced stage of this process *S. diastaticus* produces a lot of gas. The inserted Durham tube collects this gas and shows a big air bubble. Slightly slewing/moving the glass tube can support visualizing gas production. The medium is manufactured and quality tested in compliance with ISO 11133:2014 + Amd 1:2018 standard.

Final pH: **5.5 ± 0.2** at 25 °C

Microbiological quality control

Bacterial contamination

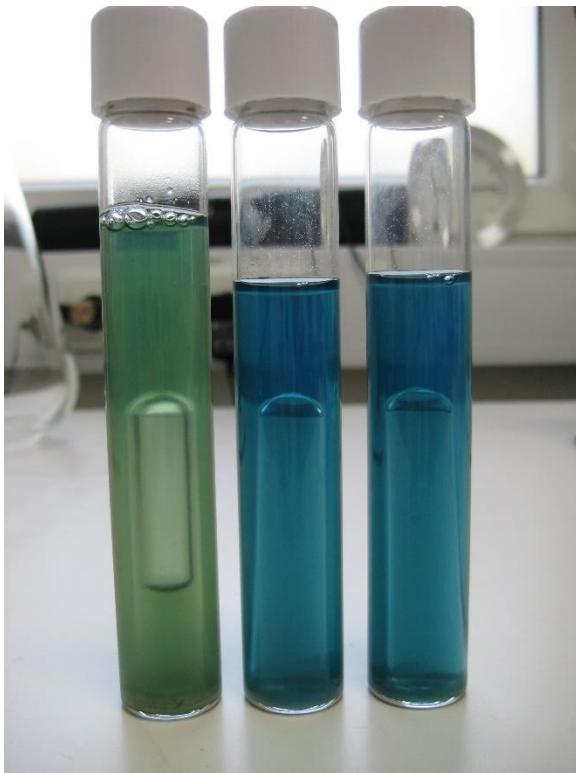
Incubation: aerobically at room temperature for 3 days, specification: no growth

Productivity qualitative analysis

Incubation: 3-7 days at 25 ± 1 °C, anaerobically (closed caps, loosen once a day for safety), mixing the media once a day

Microorganism	Test strain	Specification	Appearance
<i>S. diastaticus</i>	DSM 70487	Good growth, color changing, gas production	Turbidity, color changing to light green, gas in Durham tube
<i>S. diastaticus</i>	PCR detected beer spoiling yeast in a brewery	Good growth, color changing, gas production	Turbidity, color changing to green, gas in Durham tube
<i>S. cerevisiae</i>	DSM 70449	Inhibited	Fully inhibited
<i>S. cerevisiae</i>	WDCM 00058	Inhibited	Fully inhibited
<i>Zygosaccaromyces rouxii</i>	DSM 7525	Partly inhibited	Slightly turbidity possible

Microorganism	Test strain	Specification	Appearance
<i>Schizosaccharomyces pombe</i>	DSM 70576	Partly inhibited	Slightly turbidity possible
<i>Brettanomyces bruxellensis</i>	DSM 70001	Partly inhibited	Slightly turbidity possible
Wild yeast	Isolated of young wine	Partly inhibited	Slightly turbidity possible
Wild yeast	Isolated from berries	Inhibited	Fully inhibited



1 2 3

1. Diastaticus broth with *S. diastaticus* DSM 70487 (1ml beer added)
2. Diastaticus broth with *S. cerevisiae* WDCM 00058
3. Diastaticus broth with *S. cerevisiae* DSM 70449