



Reference : 01-323

Scharlau Microbiology - Technical data sheet

Product :  
LYSINE AGAR**Specification**

Synthetic and differential medium for the isolation, cultivation and enumeration of wild yeast in the brewing industry.

**Formula \* in g/L**

Dextrose.....	44.5000g	Pyridoxine.....	0.4000mg
Agar.....	17.8000g	Nicotinic acid.....	0.4000mg
Monopotassium phosphate.....	1.7800g	Ferrous sulfate.....	0.2200mg
Lysine.....	1.0000g	p-aminobenzoic acid.....	0.2000mg
Magnesium sulfate.....	0.8900g	Riboflavin.....	0.2000mg
Calcium chloride.....	0.1780g	Manganese sulfate.....	0.0350mg
Sodium chloride.....	0.0890g	Zinc sulfate.....	0.0350mg
Inositol.....	0.0200g	Ammonium molybdate.....	0.0180mg
Calcium pantothenate.....	2.0000mg	Boric acid.....	0.0089mg
Adenine.....	1.7800mg	Biotin.....	0.0020mg
DL Methionine.....	0.8900mg	Folic acid.....	0.0010mg
L-Histidine.....	0.8900mg		
DL Tryptophan.....	0.8900mg		
Thiamine HCl.....	0.4000mg		

Final pH 4,8 ±0,2 at 25 °C

\* Adjusted and /or supplemented as required to meet performance criteria

**Directions**

Suspend 66 g of powder in 1 L of distilled water containing 10 mL of a solution of potassium lactate 50%. Bring to the boil, constantly stirring and cool to 50°C. Add 1 mL of lactic acid to adjust the pH (~ 1 mL of a 10% solution) and pour into plates. DO NOT AUTOCLAVE.

**Description**Most of the *Saccharomyces* strains employed in the brewery industry and other fermentative industries do not use lysine, whereas the wild strains do. This medium uses this property to differentiate both types of yeasts.**Technique**Morris and Eddy recommended surface inoculation of a washed aliquot from the pitching yeast mass: 0.2 mL of a suspension of 10<sup>7</sup> cells/mL is most suitable. Sample is incubated at 25°C and examined daily, enumerating all the colonies that have grown (Lysine +).

Results are referred to as wild cells per million of cells from the original inoculum.

When the results exceed 10000 (10<sup>4</sup>), it is considered that the wild yeast population may be dangerous.**Quality control****Incubation temperature:** 20 - 25 °C**Incubation time:** 48 h- 5d**Inoculum:** ≥ 10<sup>3</sup> CFU (specificity) according to ISO 11133:2014/Amd 1:2018. Spiral Plate Method.**Microorganism****Growth****Remarks***Pichia fermentans* ATCC® 10651

Good

LYS (+)

*Saccharomyces carlbergensis* ATCC® 2700

Poor

LYS (-) Slight background film

**References**

- ATLAS, R.M., L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
- FOWELL, R.R. (1965) The identification of wild yeast colonies on Lysine Agar. J. appl. Bact. 28. 373-383.
- MORRIS, E.O., A.A. EDDY (1957) Method for the measurement of wild yeast infection in pitching yeast. J. Inst. Brew. 63(1)34-35.
- WALTERS L.S. & M.R. THISELTON (1953) The utilization of Lysine by yeasts. J- Inst. Brew. 59. 401-404.

**Storage**

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).