

2. Yeast cultivation on the agar-agar substratum

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The aim of the laboratory practice is cultivation of yeast colonies from different natural backgrounds and founding of its prevalence.

INTRODUCTION

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APPARATUSES AND APPLIANCES

Laboratory incubator

GLASS AND CHEMICALS

Petrie glasses, Erlenmeyer flask, optical microscope

MEASURING SCHEDULE

I. Preparation of substrate

- a. prepare the 50 cm³ of agar solution, accordingly to the recipe given on the box of agar,
- b. disinfect the agar in the laboratory heater in 120°C by 20 minutes together with Petrie glasses,
- c. take out the agar solution and Petrie glasses on the wooden plate and fill Petrie glasses with hot solution in such a way to obtain the thin 1 mm layer,
- d. wait for the cooling down of glasses to the room temperature, substrate should become a form of solid gel.

II. Inoculation of the agar

- a. pill the inoculum of microorganisms from the skin of the fruit or bulb or take drop from the control yeast solution,
- b. introduce the inoculum to the surface of agar substrate (Fig.1), by the first method for control yeast solution, and third method for other samples,
- c. close the Petrie glasses, sign with marker and put it to the laboratory incubator for one day at temperature 35°C,
- d. after one day incubation observe the samples under the optical microscope
- e. if observation is impossible after the day put the sample to the refrigerator until the observation is possible.

Data processing

No calculation is necessary

Questions (short, several statement answer):

1. What is the Latin name of bakery or winery yeast?
2. Where could we find the colonies of the yeast in the nature?
3. What is the best temperature range for yeast cultivation?

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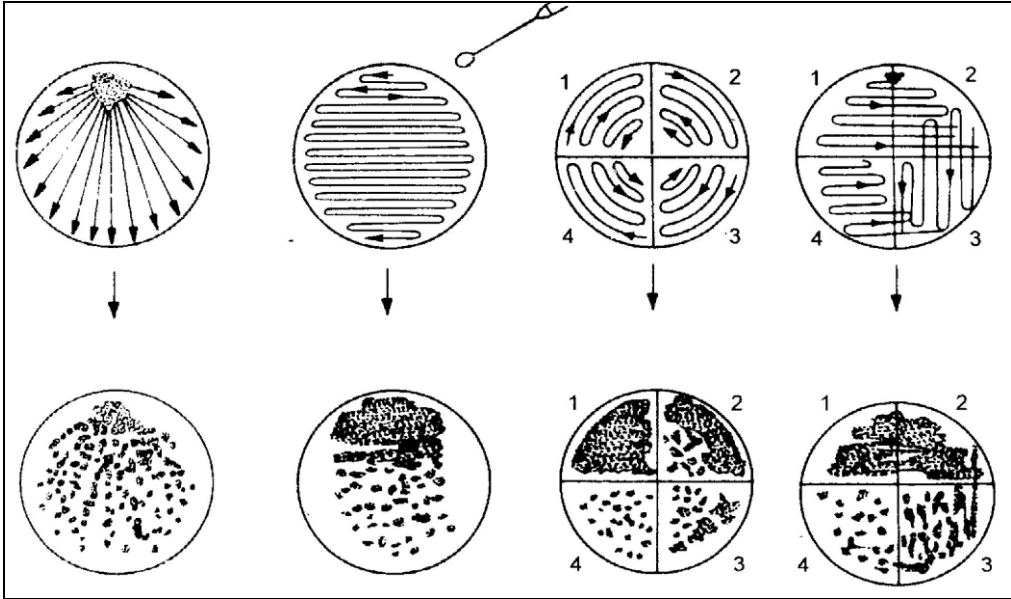


Fig. 1. Ways of inoculum introduction on the surface of agar substrate

First and second way of inoculation is characteristic for the liquid inoculum introduction. Third and fourth is used for inoculation by the hard sample of substrate: gels, waxes, muds or saliva