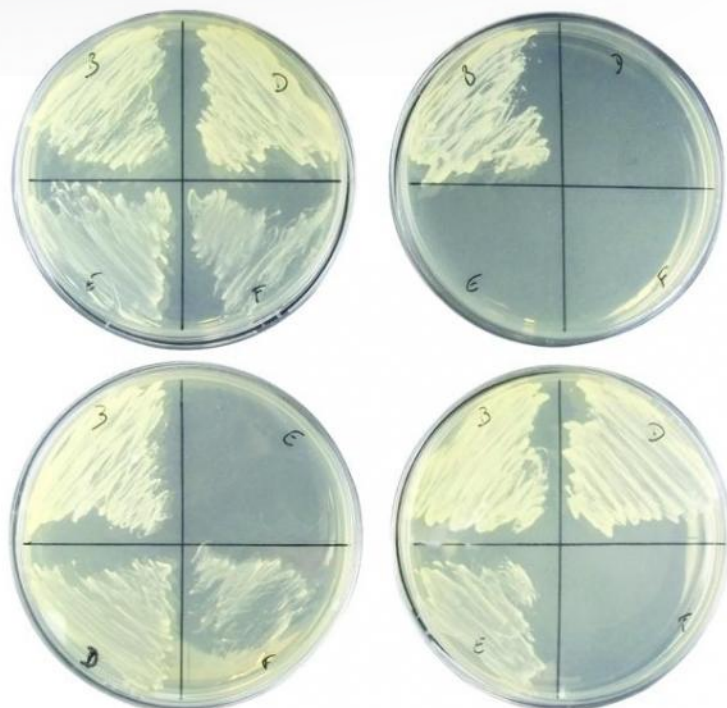


Reference : LEV/SMAC.



Strains and pouring medium

The Earth in the universe, life and the evolution of life

Cognitive objectives:

Show the effect of mutations on cellular metabolism and understand the role of the genome.

Proposed activity:

1) Comparison of the two types of cell division by microscopic observation.

2. Identification of the nutritional and energy needs of four strains of yeasts:

Four media differing by their carbon source will be used. Students will have a box of each medium divided into four equal quarters. Using a sterile inoculating loop, each strain will be seeded on one quarter of each of the four boxes.

Results obtained:

Growth or not of the strains depending on the media.

Division by scissiparity of *Schizosaccharomyces pombe* observable under the microscope.

Composition :

The kit is automatically composed of strains and media

- STRAINS:
 - Saccharomyces cerevisiae (wild strain)
 - Saccharomyces cerevisiae (rho-strain: unable to breathe)
 - Saccharomyces cerevisiae (sac-strain: unable to metabolise sucrose)
 - Schwanniomyces castellii (has amyolytic activity)

Schizosacharomyces pombe (divides by scissiparity)

- MEDIUM:

NO. 5: Minimum media +glucose

No.6: Minimum media + glycerol

N°o. 7 : Minimum media + saccharose

No. 8 : Minimum media + starch

MATERIAL (for 40 students):

- 80 sterile inoculating loops
 - 5 sterile spreaders
 - 99 sterile Petri dishes - diameter 90mm
 - 2 sterile droppers
- Technical and educational instructions available on our website.

Conservation: 2 months at 4° C

Transplanting the strains every month.