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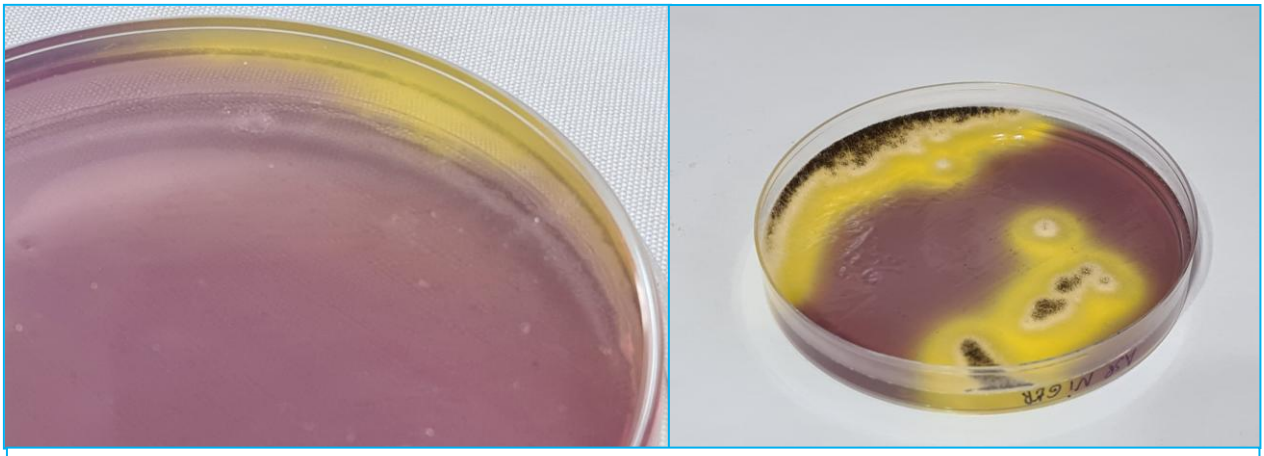
RAPID SABOURAUD RYM AGAR-YEAST & MOULDS ACCELERATOR

Innovative agar for the rapid detection of fungi (yeasts + moulds) in just 18-48 (72) hours, by turning from violet to yellow, even in products with preservatives (cosmetics, foods...)



Aspergillus niger. Left: in just 18 hours, medium already turns from lilac to yellow. Right: Appearance of the same plate in just 36 hours.

JUSTIFICATION: WHY WAS IT NECESSARY?

There are numerous agars for isolation and counting of fungi (yeasts and molds). Some are the best known although their origin is clinical microbiology (Sabouraud), others are better for optimizing counts (RB Caf and DRBC), others for increasing their biomass (PDA, MEA, SMA), others have been created for microbiology. food (OGYE, YGC, DG18…). But they all have the same problem: the need to incubate for 3-5 days to know the results, thus becoming the weakest link in the chain in the control laboratory, because it delays the release of the final product for no less than a week. Aware of this problem, MICROKIT created the Rapid-H accelerator broth in 2019 for early detection of fungi in cosmetics, foods, etc. And all that remained was to transfer it to agar medium, to allow counting (by Digralsky sowing) or isolation for identification (by streak sowing after enrichment) in said broth (or in Buffered Peptone Water, Buffered Peptone Neutralizing Water, LPT Neutralizing Broth, Eugon...). Here are the results: Sabouraud base doped. Valid for all types of samples with pH > 4.0

COMPOSITION (Base Sabouraud Dextrose Caf Agar)

Nutrient factors 15.0 g/L
Mix of selective agents 0.2 g/L
(Formula per liter)
Various salts 6.34 g/L
Agar-agar 15.0 g/L
Final pH: adjust to 7.3 ± 0.2

INSTRUCTIONS FOR USE AND INTERPRETATION:

1- If you use dehydrated medium, weigh 36.54 g, add to 1 L of double-distilled water, stir, heat until boiling, stirring frequently to avoid lumps. Autoclave at 121ºC for 15 minutes. Cool to 50ºC, adjust pH to 7.3 (if necessary depending on the water used: the medium should get the same lilac color as the photos in this brochure). Dispense into plates or Rodac (for rapid sampling of surfaces, and air with impact equipment MBS) and allow to solidify.

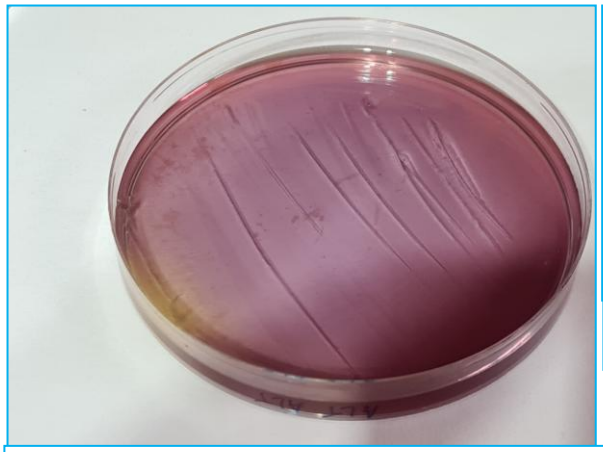
2-If you use prepared 100 mL bottles, melt them in boiling water for a few minutes until they are completely liquid, cool to 50ºC and pour into 5x 90 mm sterile plates or 6x Rodac plates (for early analysis of surfaces, and air with MBS euqipment of impact).

3-If you use Ready-to-use plates or have prepared them from powdered medium or prepared bottles, you can sow in two ways: a) In streaks if you have enriched the sample, for simple detection and

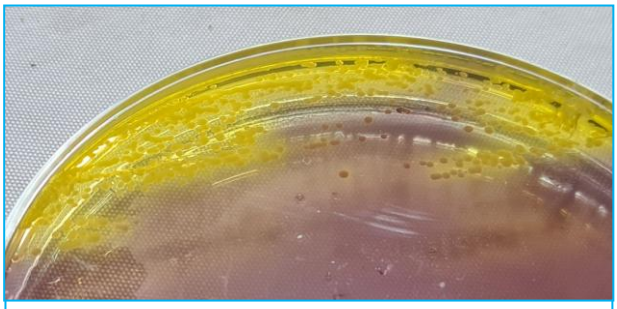
identification of fungi (yeasts and molds). . b) in Digralsky sowing (VCL155) a maximum (Good Lab Practices) of 0.33 ml of stock solution and its dilutions, to count fungi (yeasts and molds). You will need to use 3 plates if GLP and add the 3 results to obtain a reliable count in 1 mL (=0.1 g of sample in the stock solution). Do not pour plate: molds and many yeasts are very aerophilic and grow very slowly in masses. It is preferable to have used Rapid-YM accelerator broth as a diluent or as an enricher.

4-Incubate at 32.5 ± 2.5 ºC (this is not a tipo: in this medium yeasts and molds grow better at that temperature than at the traditional 22.5ºC, which saves you a culture oven), for 18-48 hours. NOTE: some molds such as *Alternaria alternata, Penicillium digitatum, Mucor racemosus*... are not capable of growing at 35ºC, so it is prudent to always incubate a duplicate plate at 25ºC.

5-Any early violet agar turn to yellow indicates the presence of fungi, since the medium is selective against bacteria and contains factors that stimulate fungal growth even in a sub-lethal state. The sample may have preservatives, since the agar is formulated for this type of product. If there is no change, nor colony growth, as a precaution, leave another 24 hours (total 72 hours) in case the fungi are stressed or in a sub-lethal state. If color change occurred when sowing (samples pH <4), you should use dilution or enrichment broths that do not acidify, buffered (ideally Buffered Peptone Neutralizing Water). Sometimes appears yeast and moulds colonies without previous color change to cream-yellow, but they usually grow before 48 hours.

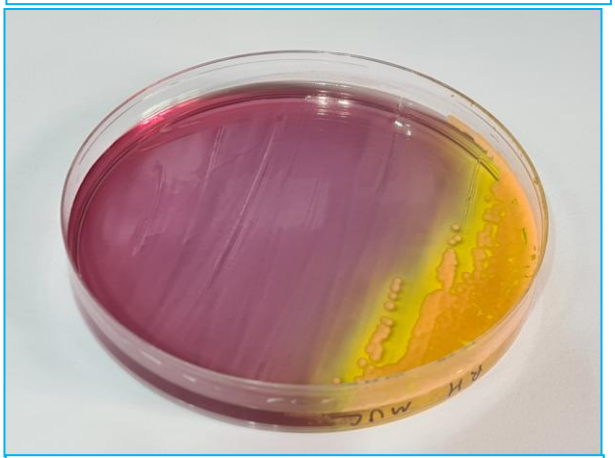


Alternaria alternata, slow mold detected in only 36 hours by turning yellow at the beginning of the streak, then colonies grow

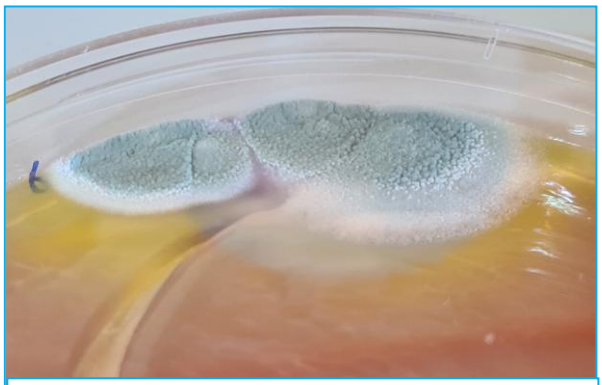


Candida albicans, yeast detected in just 16 hours by colonies with yellow halos on a violet background

KEEP THE CAN TIGHTLY CLOSED IN A DRY, COOL AND DARK PLACE. SHAKE THE CAN BEFORE USE TO ELIMINATE ANY DENSITY GRADIENTS OF THE COMPONENTS, ESPECIALLY AFTER PROLONGED STORAGE. FOR EXCLUSIVE USE IN LABORATORY.



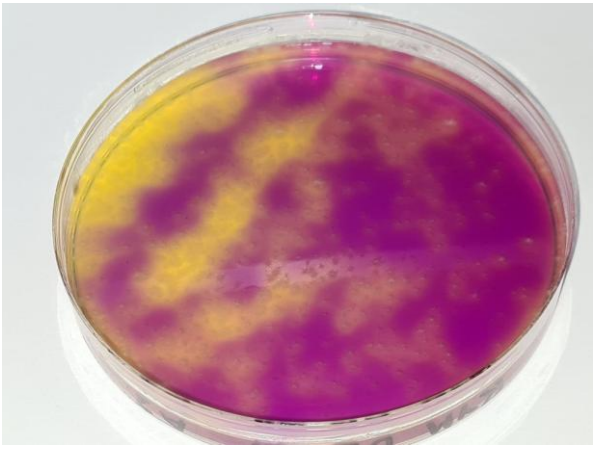
Rhodotorula mucilaginosa, slow yeast detected in only 36h by orange colonies and yellow medium around it (same as *Saccharomyces cerevisiae*: white colonies and yellow medium)



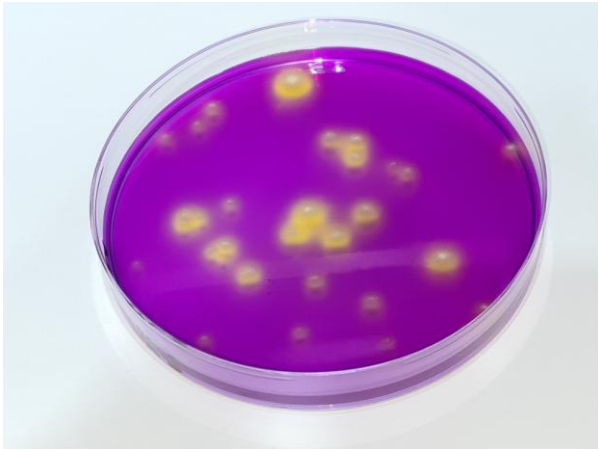
Penicillium digitatum, slow mold sporulated in just 72 hours with green-gray colonies after an early turn to yellow medium.

PRESENTATION AND EXPIRATION: DEHYDRATED (DMT243): 5 years, PREPARED PLATES (PPLM24 in a box of 80 u and ECOP07 in a box of 200 u): 3 months, Hermetic plates (PPL9RYM in a box of 40 u): 5 months, Prepared bottles 100 mL for prepare 5 plates or 6 Rodac (RPL070): 1 year. The storage temperature is not very important, although it is preferable that it be 15 to 21 ºC, at least in the prepared plates. What is essential is to KEEP PROTECTED FROM LIGHT! Do not freeze.

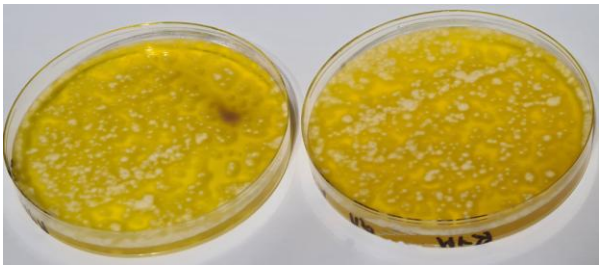
IF MONSIEUR SABOURAUD WERE ALIVE NOW, HE WOULD USE THIS MEDIUM FOR FUNGI!



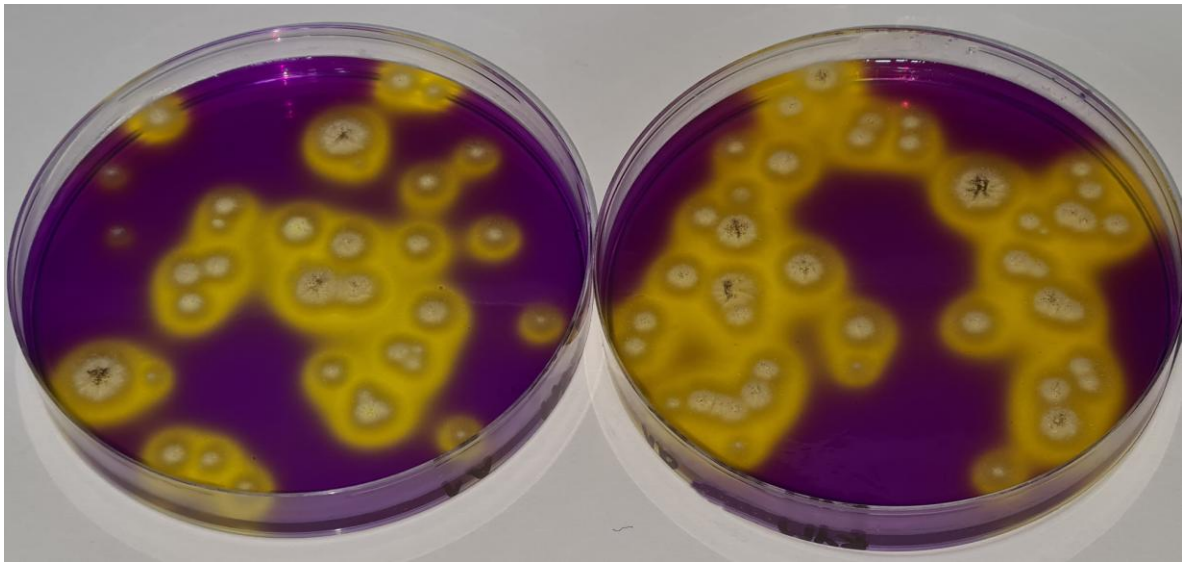
Mold Aspergillus niger brasiliensis in first 22h



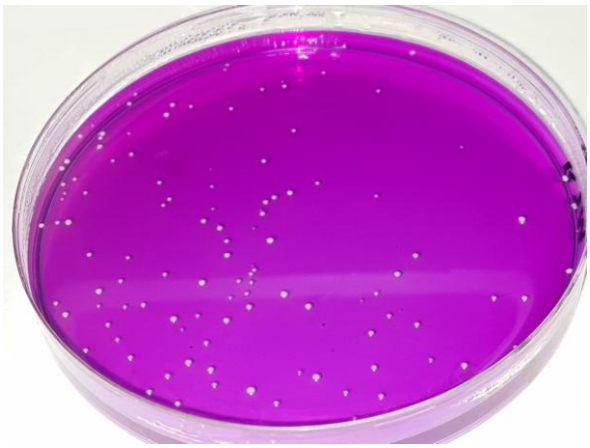
Mold Aspergillus niger brasiliensis in only 29h



Mold Aspergillus niger brasiliensis in only 29h, middle concentration (Left) and high (Right), with completely turned plate to yellow, but well isolated, countable colonies

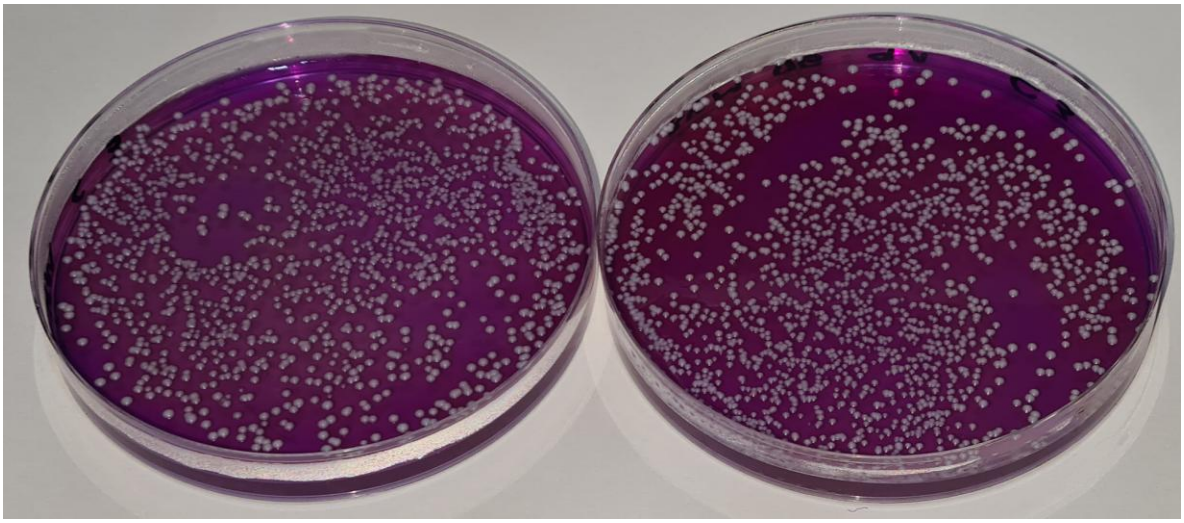


Mold Aspergillus niger brasiliensis in 36 h, already sporulated (black sporangia)



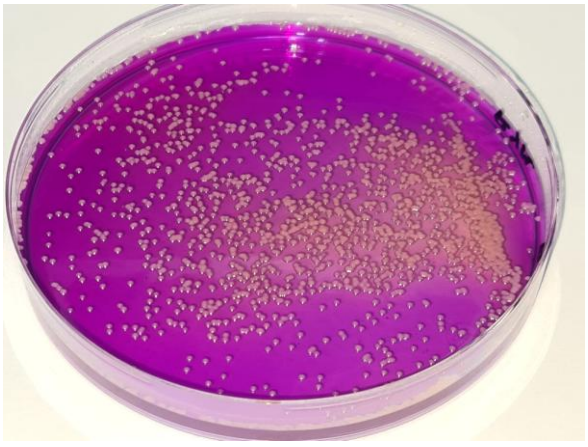
Yeast Candida albicans in first 22h

Yeast Candida albicans in 36 h



Yeast Candida albicans in 36 h with high concentration

The slow yeast Rhodotorula mucilaginosa in just 36h



The slow yeast Rhodotorula mucilaginosa in just 48h

The user is solely responsible for the destruction of the microorganisms generated inside the medium during use, in accordance with current environmental legislation. Add bleach or alcohol, or autoclave if you can, before disposing of them. Keep out of the reach of children. Do not eat.

Designed and manufactured in the EU by MICROKIT since 3-2021, under ISO 9001, ISO 11133 and GMPs, revised on 10-April-2024