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AENOR ER Empresa Registrada ER-632/1999 — ISO 9001

COLICULT-MCC COSMETIKIT® COMPACT-DRY-PLATES®
CRIOTECA® CHROMOSALM DESINFECTEST®
PLAQUIS® KITPRO-5S NUTRILINIA
M-IDENT® SEILAGUA® MUGPLUS CROMOKIT®

COSMETIKIT® WATER

COMPLETE KIT FOR MICROBIOLOGICAL ANALYSIS OF COSMETIC WATER

COMPLETE KIT for direct analysis of total aerobic count and Presence/Absence of pathogens in sample taking bottles, with no need of filtration devices. Contains chlorine inactivators. For a complete control of water used in the cosmetic industry.

INTRODUCTION

The microbiological control of water is of the highest importance in the elaboration of cosmetics. It's one of the most used raw materials and it has a wide use in cleaning tasks of containers, devices, etc.

A poor quality of the water used in cosmetics production could cause contaminations in the final product with serious consequences in final consumer health and product stability.

Current legislation guarantees the quality of water at the exit of the sewage treatment plants and public taps, but NOT at the exit of private taps used by consumers and industries. Public works, along with those performed in the buildings, put in serious danger the final security of water, often due to the penetration of fecal water in the public system; that's why it's essential the additional private control of its quality.

The MICROKIT P/A kits have been validated in Spain, comparing for years data from a large number of laboratories, using classic Membrane Filtration analysis, and those obtained using this easy-to-do technique. On our Website (www.laboratoriosmicrokit.com) you can find the 4 publications that support this validation and demonstrate that the method it's not only as good as the Membrane Filtration one, but even better! In addition, it's a much quick and simple way to develop analysis, making unnecessary the use of filtration devices or a special laboratory, being this way the microbiological water analysis within reach of everyone.

Develop weekly analysis (it's advisable a daily one) to verify that water you get from the exit of the local sewage treatment plant arrives and keeps clean in your facilities, without wastewater infiltration nor other serious microbiological problems.

According to current legislation (R.D.140, 2003) water is only fit for consumption or food factories use if the absence of pathogens or their indicators is demonstrated (Coliforms- *E. coli*, Fecal Enterococci, *Clostridium perfringens* and its spores) in 100 ml and if total count of aerobic mesophiles is below 20 ufc/1 mililitre (incubating 24 h at 37 ºC) and if total count of

aerobic saprophytes is below 100 ufc/1 mililitre (incubating 72 h at 22 ºC), both cases in nutritive YEA medium. However, there not exist specific criteria for cosmetic use water.

Given the special idiosyncrasy of cosmetic industry, prudence demands to control those microorganisms that more often affect this sector. We have chosen for this kit as only fecal indicator fecal Enterococci, being the best detected parameter in the laboratories that participate in the intercomparative analysis SEILAGUA®. Detection of Coliforms and *E.coli* can be considered redundant, while they are present fecal Enterococci will be as well, and they furthermore indicate a more continuous contamination (*E.coli* is only viable in water for 24 h while fecal Enterococci are for one week). Nevertheless if you wish to control this parameter, use in addition kit P/A RPL303. Clostridia are indicators of possible presence of enterovirus and protozoans in natural treated water, which are not very likely to find in cosmetic industry. However if well water is used, use in addition kit P/A RPL308. We have chosen as adittional parameters *Pseudomonas aeruginosa* and *Burkholderia cepacia*, the two most problematic pathogens in treated and purified water. At last, we add the two aerobic counts in comfortable CompactDryPlates®, prepared but dehidrated media, validated by AOAC and Microval, able to absorb directly 1 ml of water sample with no need to melt solid media.

HOW TO USE MICROKIT® DRINK WATER KIT

1. Presence or Absence of fecal Enterococci, *Pseudomonas aeruginosa* and/or *Burkholderia cepacia*: Add 100 ± 1 ml of water sample to each of the three bottles (RPL301, RPL302 and RPL323), leaving an air chamber at the top, shaking softly to dilute the concentrated content. Close the bottle and incúbate for 18-72 hours at 35-37ºC. If the Enterococci bottle (amber with blue layer at the top) turns black and loses its iridiscence (Fig.1, left), there exists fecal contamination due to infiltration of wastewater. If the *Pseudomonas aeruginosa* bottle (colourless) turns pink or reddish (Fig.2, left), and/or the *Burkholderia cepacia* one (orange) turns red wine colour (Fig.3, left), this pathogens are present in our water. The presence of any of this microorganisms makes water unsuitable for cosmetics fabrication. Add chlorine or bleach to the top of the bottles, or sterilize them using an autoclave, before discading.

+ Fig.1 -

+ Fig.2 -

+ Fig.3 -

2.Aerobic count at two temperatures: Add with an sterile pipette 1 ml of water sample in the center of a Compact-Dry-Plate®-TC, let the dehydrated medium absorb it and close. Repeat the same operation with another Compact-Dry-Plate®-TC. Incubate one plate for 24 h at 35 ºC aprox. and the other 72 h at 22 ºC aprox. Count every colony, that due to the TTC component, grow with reddish colours (pink, orange, red, Fig.4).

For the water to be considered fit for consumption, there must be less than 20 colonies in the plate incubated for 1 day at 35°C and less than 100 colonies in the plate incubated for 3 days at 22°C.

Fig.4 (>100 colonies)

KIT CONTENTS, CODE: KMT450

FOR **10** COMPLETE TESTS for the 5 parameters:
- 10 sterile 50 ml syringes (without needle).
- 10 sterile Pasteur pipettes.
- 10 P/A detection bottles for *Pseudomonas aeruginosa*, pathogen proceeding from badly purified water.
- 10 P/A detection bottles for *Burkholderia cepacia*, pathogen proceeding from biofilm of stagnant water.
- 10 P/A detection bottles for Enterococci, the best indicators of long term infiltration (1-7 días) of fecal water.
- 20 Compact Dry Plates ® TC for total aerobic count at 22°C and at 35 °C.

KEEP THE KITS AT ROOM TEMPERATURE (4-25ºC). IT'S VERY IMPORTANT TO KEEP THEM AWAY FROM LIGHT.

CONVENIENT MATERIAL NOT INCLUDED:

-Heaters at 22 and at 35ºC (VRP001) (indispensable).

-Aseptic zone: alcohol lamp (VLM068) or Portabunsen (ME2195) and Envirostéril (VJM002), if a laminar flow cabin is not available.

-Confirmative Test for suspicious bottles (all available consulting MICROKIT).

-Reference strains (See quantitative MICROKIT lenticles).

-Intercomparative services (SEILAGUA®).

-P/A STAPH bottles for *Staphylococcus aureus* if water of doubtful quality is used. (RPL320).

-P/A MCC bottles for Coliforms and *E.coli* if it's needed to know if the contamination due to infiltration of fecal water is very recent (just a few hours ago): RPL303

-P/A Clostricult bottles if water comes from deep wells and it's needed to control the contamination due to clostridia, indicators of enterovirus y pathogens (RPL308).

-If this kit is used daily (once or twice a week), no further microbiological analysis are needed, but if is used only once a month, add at least a weekly (better daily) aerobic count control at both temperatures using Compact Dry Plates ® TC (Ref: 1000166).

The final user is the responsible for destroying any grown microorganism according to the environmental legislation. Use autoclave sterilization before discarding any material or use Pipo-Netto (VMT236).

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