COMPLETE RANGE!

# CROMOGENIC P/A POWDER BROTHS, STERILE AND PRE-WEIGHED, FOR PRESENCE/ABSENCE CONTROL OF MICROORGANISMS IN WATER AND OTHER LIQUIDS

Laboratorios MICROKIT ¡Pasión por la creatividad!

- Use the most convenient, easy and sensitive international method to detect pathogens and indicators in water and other colorless liquids.
- Without filtration devices (which are only necessary for enumeration), membranes nor its critical manipulations: the same sample of water serves to rehydrate the sterile powder medium.
- From the sample to the incubation, the medium serves as a transport and revitalization method.
- Analysis time: 20 seconds! Incubation time: as membrane filtration method.
- Reading the results for obvious color changes of the water, thanks to chromogenic broth media.
- Full range for drinking and bathing water.
- Discard the negative samples more reliably, avoiding waste of time*

* All culture media, used with P/A method or with any other method, are presumptive, never confirmatory (even any brand of chromogenic agars). All positive result must be confirmated with biochemical and/or immunological test to obtain real results. P/A method is much more sensitive (has far fewer false negatives) than membrane filtration method. But also is less specific (it has more false positives). For it is as useful as a negative screening, in order to process a large number of samples when the majority are negative: If the kit is negative, the result is considered negative, saving huge amount of time and handling. But if the kit is positive, the sample must be confirmed by isolating and identifying colonies in plates, to avoid of false positives.


## 1. FPA900: MICROKIT P/A COLICULT-MCC: 1 g vials for 100 ml of water

When incorporates to Lauryl Sulfate Broth the chromogenic substrate X-Gal, no need to Durham tubes to detect coliforms. Besides, Pseudomonas and Aeromonas not give rise to false positives. The detection of *E.coli* is obtained by the fluorogenic substrate MUG. The *E.coli* lactose non-fermenting and non-fluorescent MUG (as is the pathogenic O157: H7) are detected as coliforms, thanks to sorbitol and X-Gal.

### INSTRUCTIONS FOR USE AND INTERPRETATION OF RESULTS

1. Add contents of 1 vial of 1 gram of MCC P/A to 100 ml of water sample, treated with Sodium Thiosulfate. You can use directly into sterile Thiosulfate stand-up bags (ref B2787B).
2. Shake until complete disolution. Water will be transparent and a soft straw color.
3. Incubate at 35-37 (44) °C for 16-24 (48) hours.
4. Samples whose water has shifted to blue-turquoise contain coliforms (faecal if incubated at 44 ° C).
5. Samples that fluoresce blue when viewed in the dark under UV light at 366 nm (MICROKIT flashlight VMT050), contain so presumptive *E.coli*; confirm adding 1 ml of Kovacs indole (SBH056) and noting the appearance of a red ring surface, which confirms the presence of *E.coli.*
6. In samples without blue fluorescence can be present *E. coli* O157 (MUG -, Lactose -, X-Gal +), which is confirmed by being indole +. This is the only method for minimum drinking water analysis where is also detected *E.coli* O157 and its dangerous false negatives.
7. If there is no shift to blue nor fluorescence, the presence of *E. coli* and other coliform is discarded.

## 2. FPA901: MICROKIT P/A-ENTEROCULT: 1 g vials for 100 ml of water

The absence of enterococci is an excellent indicator of the absence of faecal pathogens, even easier to detect and stricter than the tandem *E.coli*-coliforms. With the Microkit Enterocult dust, analysis of fecal streptococci absence in the water is now possible in the most convenient and reliable known.

Use as described in FPA900. The water is transparent and grayish in color. Incubate at 35-37 (41) ° C for 16-24 hours. The blackening of the water is presumptive evidence of fecal streptococci, while the absence of blackening in 24 hours demonstrates its absence.

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## 3. FPA902: MICROKIT P/A-CLOSTRICULT: 3 g vials for 100 ml of water

The parameter of the absence of *Clostridium perfringens* and its spores is crucial as an indicator of the absence of enteroviruses and protozoa in drinking water, just as coliforms, *E.coli* and enterococci indicates faecal water infiltration. With the CLOSTRICULT P / A Microkit dust, analysis of the absence of spores and vegetative forms of *Cl. perfringens* in drinking water is now possible in the most convenient and reliable known method, with much better results than those obtained by membrane filtration. Use as described in FPA900. The water is now transparent, creamy color. If you are looking for spores, make a duplicate and shock it one moment heated to 75 ° C. For more selectivity, add a good layer of liquid paraffin (SDA081). Incubate at (37 -) 44-46 ° C for 16-48 hours. The blackening of the water is presumptive evidence of the presence of *Cl.perfringens*: If heat shock was performed, is presumptive evidence of the presence of spores. If no shift to black in the case of thermal shock neither without it, it is considered absence of *Cl.perfringens* and its spores.

## 4. FPA903: MICROKIT P/A *Pseudomonas aeruginosa*: 5 g tubes for 250 ml of water

*Pseudomonas aeruginosa* is a waterborne pathogen that should be monitored in water, drinks and swimming pools to prevent outbreaks and infections. Use as described in FPA900, but adding the 5 g of powder of the tube into 250 ml of water sample, treated with Sodium Thiosulfate. Shake to homogeneize; water will be translucent, straw-colored and often with a precipitate. Incubate at 30-37°C for 48-72 (-120) hours. The change to a pink colour of the water is presumptive evidence of *Pseudomonas aeruginosa*: confirm streaking on a Cetrimide Agar Plate (PPL906) and search for yellow-green fluorescent, oxidase + colonies. No change to pink of water indicates its absence. Change to red of water could be made by *B.cepacia* or some marine water flora.

## 5. FPA904: MICROKIT P/A *Burkholderia cepacia*: 3 g vials for 100 ml of water

*Burkholderia cepacia* is an emerging pathogen that creates serious problems when installed in a biofilm. Use as the FPA900, but adding 3 g of powder of the vial to 100 ml of water sample treated with Sodium Thiosulfate. Stir to mix. The water will be translucent, orange and with a large precipitate. Incubate at 30-37 ° C for 18-24 (-48) hours. The turn to opaque red wine of water shows the presumptive presence of *B.cepacia*. Without turning his presence is discarded.

## 6. FPA905: MICROKIT P/A Yeast & Moulds: 3 g vials for 100 ml of water

Many fungi (yeasts and molds) create health problems and disorders in the waters where they proliferate. Use as the FPA900, but adding 3 g of powder of the vial to 100 ml of water sample treated with Sodium Thiosulfate. Stir to mix. The water will be translucent fuchsia and often with a large pellet. Incubate in the dark at 21-25 ° C for 3-7 days. Give as positive murky jars (not shake after incubation or will suspend the precipitate giving false positive results) or flocs or floating mass. Without them their presence is discarded.

## 7. FPA906: MICROKIT P/A *Vibrio cholerae*: 5 g tubes for 100 ml of water

*Vibrio cholerae* is one of the most undesirable pathogen that lives in water. The classic indicators of fecal contamination are insufficient to rule out its presence, being fish and natural continental waters its reservoir. Use as described in FPA900, but adding the 5 g of powder of the tube into 100 ml of water sample, treated with Sodium Thiosulfate. Shake to homogeneize. Water will become opaque, blue-green and often with a large precipitate. Incubate at 28-35 °C for 18-24 hours. The change to cloudy cream colour shows the presumptive presence of *Vibrio cholerae*, no change indicates its absence. Confirm streaking on a TCBS Agar plate (PPL922) and search for yellow colonies, oxidase +, lactose -, indol + that does not grow with more than 60 g/l of ClNa.

## 8. FPA907: MICROKIT P/A *Staphylococcus aureus:* 6 g tubes for 100 ml of water

Absence of *S. aureus* is one indicador that water bath can be used without risk of transmission of many infections (otitis, conjunctivitis, pharyngitis, dermatitis, infected wounds ...). Use as described in FPA900, but adding the 6 g of powder of the tube into 100 ml of water sample, treated with Sodium Thiosulfate. Shake to homogeneize. Water will become bright red. For more selectivity, add a good layer of liquid paraffin (SDA081). Incubate at 30-37 ° C for 48 hours. The turning of water to orange is presumptive evidence of *S. aureus*, no change indicates its absence. Confirm streaking on a Mannitol Salt Agar plate (PPL907) and search for yellow colonies, coagulase + (KWD094).


**MANY MORE MICROBIOLOGICAL PARAMETERS AT YOUR DISPOSAL AS CONCENTRATED HIDRATED BROTH: Aeromonas, Algae, Cyanobacteria, *Legionella pneumophila*, Salmonella-Shigella...**

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