

BAIRD PARKER / MAC CONKEY

Selective media for *Staphylococcus aureus* and Gram-negatives isolation.

BAIRD PARKER TYPICAL FORMULA (g/L)		MAC CONKEY TYPICAL FORMULA (g/L)	
Tryptone	10.0	Tryptone	17.0
Meat Extract	5.0	Peptone	3.0
Yeast Extract	1.0	Lactose	10.0
Glycine	12.0	Bile Salts n°3	1.5
Sodium Pyruvate	10.0	Sodium Chloride	5.0
Lithium Chloride	5.0	Neutral Red	0.03
Egg Yolk Tellurite	50.0 mL	Crystal Violet	0.001
Agar	17.0	Agar	15.0
Final pH 7.2 ± 0.2		Final pH 7.1 ± 0.2	

DESCRIPTION

BAIRD PARKER AGAR is a selective medium for isolating coagulase-positive staphylococci from foods, according to ISO 6888-1:1999.

MAC CONKEY AGAR is a selective medium for Gram- negative bacteria isolation and differentiation from water, dairy products and clinical specimens according to European Pharmacopoeia. The medium allows a good growth of *Salmonella* and *Shigella spp.*

PRINCIPLE

Tryptone, meat extract and peptone yield the medium highly nutritive providing organic nitrogen, amino acids and peptides with long chain. In **BAIRD PARKER AGAR** yeast extract is a source of aminoacids and vitamins of group B while glycine and sodium pyruvate favour the growth of staphylococci. Lithium chloride and potassium tellurite inhibit contaminating flora. Egg yolk emulsion allows to put in evidence a clarifying zone around the colonies due to the activity of coagulase.

In **MAC CONKEY AGAR** lactose is a source of energy whose fermentation makes pH of the medium decrease with consequent precipitation of bile salts and absorption of neutral red. Bile Salts and Crystal Violet inhibit the growth of Gram-positive bacteria: the staining mainly inhibits the growth of enterococci and staphylococci. Agar is the solidifying agent.

TECHNIQUE

Inoculate plates streaking the sample to test on the agar surface using a sterile loop. Incubate at 36+/-1°C in aerobiosis for 18-24 hours and observe the colonies. A longer incubation time can change microorganisms cultural characteristics.

INTERPRETATION OF RESULTS

On **BAIRD PARKER AGAR** *Staphylococcus aureus* produces black shiny colonies, surrounded by a clarifying halo of the medium. Some strains of streptococci, micrococci, corynebacteria and enterococci cultivate with black colonies but they do not clarify egg yolk, while some yeasts, fungi and bacilli cultivate with gray colonies without halo.

On **MAC CONKEY AGAR** coliforms cultivate with red-pink colonies surrounded by a halo of precipitation; lactose non-fermenting bacteria cultivate with colorless colonies.

STORAGE

2-8°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

WARNING and PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. The product is designed for *In vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL of WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

- ISO 6888-1:1999 Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species) -- Part 1: Technique using Baird-Parker agar medium.
- Baird Parker, A.C. 1962. An improved diagnostic and selective medium for isolating coagulase-positive staphylococci. J. Appl. Bacteriol. 25:12-19.
- Baird Parker, A.C. (1969) The use of Baird Parker's medium for the isolation and enumeration of *Staphylococcus aureus* in "Isolation methods for microbiologists" Shapton, D.A. & Gould ed. London: Academic Press.
- FDA (1995) Bacteriological Analytical Manual, 8th ed. Revision A, 1998.
- United States Pharmacopoeia 24,2000. Microbial Limit Tests, 1814:1818.
- NCCLS, december 1996 --Quality Assurance for Commercially Prepared Microbiological Culture Media-Second Edition; Approved Standard-M22-A2, Vol.16, N°16
- European Pharmacopoeia 4th ed. 2002.



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PRODUCT SPECIFICATIONS

NAME

BAIRD PARKER/ MAC CONKEY

PRESENTATION

Ready plates (90 mm) with two sectors.

STORAGE

2-8 °C

PACKAGE

Code	Content	Packaging
18500	20 plates	1. 5 plates in thermically soldered film 2. 4 x 5 plates in cardboard box
18500*	100 plates	1. 5 plates in thermically soldered film 2. 2 x 5 plates in plastic bag 3. 10 piles (2x5 plates) in cardboard box

USE

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TECHNIQUE

Refer to technical sheet of the product.

APPEARANCE OF THE MEDIUM

BAIRD PARKER AGAR is a yellow opalescent medium.

MAC CONKEY AGAR is a pinkish-red medium, clear without precipitates.

SHELF LIFE

4 months

QUALITY CONTROL

- Control of general characteristics, label and print
- Sterility control
7 days at 25 ± 1°C, in aerobiosis
7 days at 36 ± 1°C, in aerobiosis
- Microbiological control
Inoculum for productivity: 10-100 UFC/ml
Inoculum for selectivity: 10⁴-10⁵ UFC/ml
Inoculum for specificity: ≤ 10⁴ UFC/ml

Incubation conditions: 36±1°C for 18-24 hours

Microorganisms		Growth on BAIRD PARKER AGAR	Growth on MAC CONKEY AGAR
<i>Staphylococcus aureus</i>	ATCC 25923	Good/ Black colonies/ Clarification halo	Inhibited
<i>Escherichia coli</i>	ATCC 25922	Inhibited	Good/ Red- pink colonies
<i>Staphylococcus epidermidis</i>	ATCC 14990	Good/ Black colonies	Inhibited
<i>Bacillus subtilis</i>	ATCC 6633	Poor/ Brown colonies	-
<i>Proteus mirabilis</i>	ATCC 25933	Good/ Brown colonies	Good/ Colorless colonies
<i>Salmonella typhimurium</i>	ATCC 14028	-	Good/ Colorless colonies
<i>Enterobacter aerogenes</i>	ATCC 13048	-	Good/ Red colonies

TABLE OF SYMBOLS

 IVD In Vitro Diagnostic Medical Device	 Do not reuse	 Manufacturer	 Contains sufficient for <n> tests	 Temperature limitation
 REF Catalogue number	 Fragile, handle with care	 Use by	 Caution, consult accompanying documents	 LOT Batch code



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