COLUMBIA LAB-AGAR™ + 5 % SB

For the isolation and cultivation of fastidious microorganisms and the determination of hemolytic reactions.
Columbia LAB-AGAR™ + 5% sheep blood is a isolation medium which been developed to falicitate the growth of fastidious microorganisms (2,5).

Formula in g/L

Pancreatic digest of casien	10,00	Peptic hydrolysate of meat	5,00
Yeast extract	5,00	Pancreatic digest of heart	3,00
Sodium chloride	5,00	Corn starch	1,00
Agar	13,50	Defibrinated sheep blood	50,0 ml

Final pH at 25°C: 7,3 ± 0,2

Principle:
It contains a peptone mixtures which is particularly adapted to the culture of fastidious microorganisms (streptococci, Listeria…).
The presence of sheep blood enables hemolysis determination, which is a basic criterion for the orientation of bacterial identification (1,3).
This agar is also suitable for the isolatio n of anaerobic bacteria (4,6).

Material required but not provided
- ★ Controlled atmosphere generators.
- ★ Jars.
- ★ Bacteriological incubator or
- ★ Thermoreguled chambers with a controlled atmosphere.

Warning and precautions
- ★ **For in vitro diagnostic use and microbiological control**
- ★ **For professional use only**
- ★ This medium contains products of animal origin. Certified knowledge of the origin and/or sanitary state of the animals does not totally guarantee the absence of transmissible pathogenic agents. It is therefore recommended that these products be treated as potentially infectious and handled observing the usual safety precautions (do not ingest or inhale).
- ★ All specimens, microbial cultures and inoculated products should be considered infectious and handled appropriately. Aseptic technique and usual precautions for handling the bacterial group studied should be observed throughout this procedure. Refer to “CLSI/NCCLSM29-A, Protection of Laboratory Workers from Instrument Biohazards and Infectious Disease Transmitted by Blood, Body Fluids and Tissue Approved Guideline- Current Revision”. For additional Handling precautions, refer to “Biosafety in Microbiological and Biomedical Laboratories, CDC/NIH, Latest Edition”, or to the regulations currently in use in each country.
- ★ Culture media should not be used as manufacturing material or components.
- ★ Do not use reagents after the expiry date.
- ★ Do not use reagents if the packaging is damaged.
- ★ Do not use contaminated plates, or hemolyzed plates or plates that exude moisture.
- ★ The performance data presented were obtained using the procedure indicated in this package insert. Any change or modification in the procedure may affect the results.
- ★ Interpretation of the test results should be made taking into consideration the patient’s history, the source of the specimen, colonial and microscopic morphology and, if necessary, the results of any other tests performed.

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Storage / Shelf life

- ★ Store the plates in their cellophane sachet at 2 - 12°C until the expiry date.
- ★ If not in the cellophane sachet, plates can be stored for 2 weeks at 2-8°C.

Specimens

All types specimens can be used and should be directly inoculated on the agar.
Good laboratory practices for collection and transport should be respected and adapted to the type of specimen (6).
This medium can be used to subculture bacterial strains in oreder to obtain pure cultures.

Instruction for use

1. **Allow plates to come to room temperature.**
2. Inoculate the specimen.
3. Put the plate in a suitable atmosphere, if necessary using a controlled atmosphere generator.
4. Incubate with the cover bottom side at 37°C. The user is responsible for choosing the appropriate incubation temperature depending on intended use and in accordance with current standards. Incubation time varies according to type of specimen and the microorganisms being tested for. The cultures are generally examined after 24-48 hours of incubation. In certain cases, it may be necessary to prolong incubation.

Reading and interpretation

- ★ After incubation, observe the bacterial growth
- ★ Record the presence of any characteristic hemolysis
  - α- hemolysis: greenish discolorationof medium
  - ß-hemolysis: clear zone surronding colony
- ★ Identification of the microorganisms isolated must be followed by biochemical or immunological tests.

Quality control

Protocol:

The nutrient capacity of the medium can be tested using the following strains (incubation in CO_2 enriched atmosphere):

- ★ Streptococcus pyogenes ATCC 19615
- ★ Streptococcus pneumoniae ATCC 6305

Range of expected results

Strain	**Results at 33-37°C**	
Streptococcus pyogenes ATCC 19615	Growth after 24 hours	ß-hemolysis
Streptococcus pneumoniae ATCC 6305		α- hemolysis

Note:

It is the responsibility of the user to perform Quality Control taking into the intended use of the medium, and in accordance with any local applicable regulations (frequewncy, number of strains, incubation temeprature, etc.).

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Limitation of the method

- ★ Growth depends on the requirements of each individual microorganims. It is therefore possible that certain strains of Salmonella and Shigella which have specific requirements may not develop.
- ★ The type of hemolysis depends on the species in question and the specific behavior of each strain.
- ★ Depending on the specimens analyzed and the microorganisms being tested for, it is recommended to uese Columbia LAB-AGARt +5% sheep blood in conjunction with additional media (selective media, Chocolate agar).

Waste disposal

Dispose of used or unused reagents as well as any other contaminated disposable material following procedures for infectious or potentially infectious products.
It is the responsibility of each laboratory to handle waste and effluents produced according to their nature and degree of hazardousness and to treat and dispose of them (or have them treated and disposed of) in accordance with any applicable regulations.

Literature references

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4. Flandoris J.P., Chomarat M.- Bacteriologie medicale practicue- MEDSI / Mac Graw-Hill- 1989-ISBN 2-86439-161-9.
5. Murray P.R., Baron E.J., Pfaller M.A. and al. – Manual of Clinical Microbiology- 6th Ed.- ASM Press, 1995- ISBN 1-55581-086-1.
6. Rodloff A.C., Appelbaum P.C., Zabransky R.J.- Cumitech 5A. Practical anaerobic bacteriology- American Society for Microbiology, 1991-ISBN 1-55581-C05A.

Pack size	Ref.
Box of 20 Petri dishes 90 mm	PP 1190

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