

CM 20,081 – ANDRADE PEPTONE WATER W/ MEAT EXTRACT

INTENDED USE

Abasal medium to study fermentation reactions of members of the Enterobacteriaceae.

PRODUCT SUMMARY AND EXPLANATION

Bacteria differ widely in their ability to metabolize carbohydrates and related compounds. Carbohydrate fermentation reactions aid in the differentiation and identification of various bacteria. Andrade Peptone Water w/Meat Extract is the most commonly used media for carbohydrate fermentation.

The Andrade indicator changes colour from yellow to pink as the pH decreases. The medium is pink when hot but becomes straw coloured on cooling. Test carbohydrate solutions should be sterilized separately and aseptically added to sterile Andrade Peptone Water w/Meat Extract. The biochemical identification of organisms capable of growing in this medium is made by various sugar fermentation results. Use fresh cultures of organisms only which have been presumptively identified by Gram staining and colony morphology. For final identification further biochemical tests are required. Desired carbohydrate is added to the medium, which is inoculated with the test organism. If the test organism metabolizes the added carbohydrate, acids are produced, thereby lowering the pH of the medium. This causes a subsequent colour change of the indicator, from colourless to pink to red. If the added carbohydrate is not metabolized, the medium remains pale tan to straw coloured. Gas produced during fermentation is collected in the Durhams tube.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	10.000
Meat extract	3.000
Sodium chloride	5.000
Andrade indicator	0.100

PRINCIPLE

Peptone used in the medium is free from fermentable carbohydrates and the medium is also free from nitrates which may interfere with gas production. Meat extract is an additional source of nutrients. Andrade indicator is a solution of acid fuchsin which when titrated with sodium hydroxide; changes colour from pink to yellow.

INSTRUCTION FOR USE

Dissolve 18.1 grams in 1000 ml purified / distilled water.

Heat if necessary to dissolve the medium completely and dispense in test tubes containing inverted Durham's tubes.

Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

Cool to room temperature and aseptically add sterile stock solution of carbohydrate to a final concentration of 0.5% to 1.0% (w/v).

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow coloured with pink tinge homogeneous free flowing powder.
Appearance of prepared medium	: Light pink to straw coloured clear solution without any precipitate.
pH (at 25°C)	: 7.1±0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Acid in absence of dextrose	Gas in absence of dextrose	Acid with added dextrose	Gas with added dextrose	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	Negative reaction	Negative reaction	Positive reaction, colour changes to pink-red	Positive reaction	35-37°C	18-24 Hours
Klebsiella pneumoniae	13883	50-100	Luxuriant	Negative reaction	Negative reaction	Positive reaction, colour changes to pink-red	Positive reaction	35-37°C	18-24 Hours
Proteus vulgaris	13315	50-100	Luxuriant	Negative reaction	Negative reaction	Positive reaction, colour changes to pink-red	Positive reaction	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	Negative reaction	Negative reaction	Positive reaction, colour changes to pink-red	Negative reaction	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	Negative reaction	Negative reaction	Positive reaction, colour changes to pink-red	Positive reaction	35-37°C	18-24 Hours
Shigella flexneri	12022	50-100	Luxuriant	Negative reaction	Negative reaction	Positive reaction, colour changes to pink-red	Negative reaction	35-37°C	18-24 Hours
Shigella sonnei	25931	50-100	Luxuriant	Negative reaction	Negative reaction	Positive reaction, colour changes to pink-red	-	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.



Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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2. Finegold S. M. and Baron E. J., 1986, Bailey and Scotts Diagnostic Microbiology, 7th Ed., The C.V. Mosby Co., St. Louis.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
6. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Tenover F.C., Tenover R.H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only