

Instructions for Use

REF - PP0090

Columbia Agar

Pre-Poured Media

1. Intended Use

For *in vitro* diagnostic use. PP0090 Columbia Agar is a general-purpose, non-selective medium capable of supporting the growth of most microorganisms.

2. Composition*

<u>Ingredient</u>	<u>g/L</u>
Peptones	23.0
Starch	1.0
Sodium chloride	5.0
Agar	11.0

*Adjusted/supplemented as needed to meet performance requirements

3. Summary and Explanation

Columbia Agar is based on the original Columbia Agar formulation described by Ellner et al. from Columbia University ⁽¹⁾.

4. Principle

Peptone is the source of the required nitrogen, carbon, and vitamins.

5. Physical Characteristics

	Medium
Appearance and Colour	Straw firm gel
pH	7.3 ± 0.2

6. Materials Provided

PP0090 Columbia Agar is supplied in packs of 10 x 90mm P090 Petri dishes (18-22ml fill) (product code: PP0090-P090); each plate is ink-jet printed with (abbreviated) product name, product code, lot number and expiry date.

7. Materials Needed but not Provided

Standard microbiological laboratory materials e.g., autoclave, sterile loops or swabs, collection containers, incubators, and quality control organisms.

8. Specimens

PP0090 Columbia Agar is suitable for the testing of the following specimens:

- Food and Environmental: products for human consumption, animal feed and environmental samples
- Clinical: various samples and swab

Sampling and transport equipment must be used in accordance with the end user's suppliers' recommendations. Refer to appropriate standard method or local guidance on sample collection and subsequent processing.

9. Test Procedures and Interpretation of results

Based on sample type and information provided, check to see if the clinical specimen needs to be pre-enriched prior to inoculation to the prepared medium.

Inoculate media directly with the sample, or subculture onto media after incubation in enrichment broth where required.

Food and Environmental Specimens:

For solid samples, prepare a homogenised suspension using a ratio of 1:9 of sample to Maximum Recovery Diluent (E&O BM0760). With homogenised and liquid specimens, media should be inoculated with 1ml of the specimen and incubate at 37 ± 1°C aerobically for 18-24 hours.

Clinical Specimens:

Inoculate specimen, or pre-enriched sample, directly onto the medium and streak across the agar surface using a sterile loop or automated plate streaker. Incubate at 37 ± 1°C aerobically for 18-24 hours.

After incubation, examine agar for colonies (typical colony appearance outlined in Quality Control table below). Perform further biochemical, serological, or mass spectroscopy testing to confirm identity of presumptive positive isolates. Refer to relevant local guidelines.

10. Quality Control

Organism	Incubation	Result (Specificity)
<i>S. aureus</i> (NCTC 12981)	37 ± 1°C aerobically for 18-24 hours	Growth: White colonies
<i>E. coli</i> (NCTC 12241)	37 ± 1°C aerobically for 18-24 hours	Growth: Cream colonies

It is the responsibility of the user to perform Quality Control testing taking into consideration the intended use of the medium and in agreement with any local relevant guidelines (e.g., frequency, strains used, atmosphere, incubation temperature).

11. Performance

To fully verify PP0090 Columbia Agar performance, samples were tested to assess colony morphology and recovery level (where an acceptable range is ≥70% and ≤120%) compared to a non-selective reference medium. Samples were inoculated with 30-150cfu and incubated at 37 ± 1°C aerobically for 18-24 hours. All samples showed expected recovery and morphology of the required test organisms: *Staphylococcus aureus* (NCTC 12981) and *Escherichia coli* (NCTC 12241). Therefore, it can be concluded that PP0090 Columbia Agar, meets performance criteria when used according to the instructions outlined above. Trend analysis data available upon request.

12. Limitations of the Media

- Due to natural variation, some strains may grow poorly on this medium.

13. Precautions and Warnings

This product is considered non-hazardous under CLP regulations. Wear such PPE as recommended by laboratory COSHH assessment. During and after use, always handle all materials in a manner conforming to Good Laboratory Practices and consider that material under test should be regarded as a potential biohazard if mishandled.

Refer to E&O Poured Plate Material Safety Data Sheet.

14. Storage conditions and Shelf life

Store PP0090 in the original packaging between 2 and 8°C in the dark. Kept under these conditions it may be used up to date of expiry shown on product label.

Dispose of in accordance with local and national authority requirements. Do not use media if it is contaminated, discoloured, out of date, cracked or a precipitate is present. Additionally, do not use media if it has been stored inappropriately or the packaging has been damaged.

15. References

1. Ellner, P., Stoessel, C., Drakeford, E. and Vasi, F. (1966) A New Culture Medium for Medical Bacteriology. American Journal of Clinical Pathology, 45, pp.502-504.

Version History*

001 11/01/24 - New Document Created

*Note: minor typographical, grammatical, and formatting changes are not included in the revision history.

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TABLE OF APPLICABLE SYMBOLS

 REF Catalogue number	 LOT Batch code	 IVD In vitro Diagnostic Medical Device	 Manufacturer	 Use by
 Temperature limitation	 Contents sufficient for <n> tests	 Consult Instructions for Use	 Keep away from direct light	 Store in a dry place