

MAST® Culture Media and Supplements

Technical Information Sheet

Product Code DM 115



Columbia Agar

A versatile and nutritious medium for growth of fastidious organisms.

1. Description

In the clinical laboratory the most important culture medium is blood agar, which has traditionally been a meat infusion or casein hydrolysate. The former type tends to give sharply defined haemolytic reactions, typical colonial morphology and improved pigmentation, while the latter type gives more rapid and luxuriant growth.

As early as 1947 it had been shown by Casman¹ that starch improved the growth of

neisseria and enhanced haemolytic reactions of some streptococci. Ellner *et al.*² used these properties in developing Columbia Agar Base, a starch containing medium which combined the advantages of the two types of blood agar. Columbia Agar has proved to be a very versatile medium and has been used, with the addition of serum, in virulence tests for diphtheria³ and as a presumptive identification medium for Group B streptococci.^{4,5}

2. Technical Formula*

Formula	grams per litre
Peptone mixture	20.0
Agar	12.5
Sodium chloride	5.0
Starch	1.0
D-glucose	0.5
pH approx. 7.2	

4. In Use

Columbia Agar can be used alone, or with the addition of 5-7% blood. The medium can be made selective with the addition of various antibiotics.⁶

3. Directions

1. Suspend by swirling 39.0g of powder in 1 litre or the contents of the sachet in the stated volume of distilled water.
2. Autoclave at 121°C (15p.s.i.) for 15 minutes.
3. Cool to 50°C and add 5-7% sterile defibrinated horse blood where required.

5. References

1. Casman EP. *Am J Clin Pathol.* 1947; **17**: 281- 289
2. Ellner PD, Stoessel CJ, Drakeford E, Vosi F. *Am J Clin Pathol.* 1966; **45**: 502-504
3. Elek SD, *Br Med J.* 1948; **1**: 493-496
4. Fallon RJ. *J Clin Pathol.* 1974; **27**: 902-905
5. Merrit Katharine, Treadwell T, Jacobs NJ. *J Clin Microbiol.* 1976; **3**: No.3 287-290
6. Thayer JD, Martin JE. *Pub Hlth Report* 1966; **81**: 559-562



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*Formulation may be modified to meet performance criteria

SJW|10/17|V.2