

# Columbia Agar Base

## BC2001

The medium of choice for the routine isolation of clinically significant pathogens, this medium is usually enriched with sterile blood. Classical colony formation and haemolysis patterns are diagnostic features on this medium. Growth of more fastidious organisms can be further enhanced by 'chocolating' the added blood. The medium is often made selective for various types of organism by addition of appropriate selective agents.

### Formula grams per litre

Columbia Peptones	20.0
Starch	1.0
Glucose	0.5
Sodium chloride	5.0
Bacteriological Agar	12.5

pH 7.3 +/- 0.2

**Appearance:** Dependant upon the oxygenation level of the added blood, it should be cherry red with no signs of haemolysis.

### Preparation

Suspend 39.0 grams of powder in 1 litre of deionised water. Autoclave at 121°C for 15 minutes

Cool to 48°C and add 5-7% of sterile defibrinated horse or sheep blood. Mix well by swirling and pour into 90mm petri dishes.

Optional – To 'chocolate' the added blood hold the medium at 80°C for 10 minutes with frequent swirling

Add any required selective agents at the same time as the addition of blood or, if 'chocolating', after the 'chocolating' procedure, mix well then pour.

### Storage of Prepared Medium

Plates should be stored at 4-8°C in the dark. Plates should be used within 1 week.

### Quality Control Organisms - Suggestions

<i>E coli</i>	ATCC 25922 (NCTC 12241)	
<i>S. aureus</i>	ATCC 25923 (NCTC 12981)	β haemolysis
<i>St pyogenes</i>	ATCC 12344	β haemolysis
<i>H. influenzae</i>	ATCC 49247 (NCTC 12699)	-
<i>St. pneumoniae</i>	ATCC 49619	α haemolysis
<i>N. gonorrhoeae</i>	ATCC 49226 (NCTC 12700)	-

### Supplementation and Selective Agents

Organism	Blood	Selective Agent
Haemophilus spp	5% chocolate horse blood	Bacitracin S260
<i>St. pneumoniae</i>	5% chocolate horse blood	
Gram positive cocci	5% whole horse blood	Colistin, Nalidixic Acid S012
<i>Neisseria</i> spp	5% chocolate horse blood	
Haemolytic streptococci	5% whole horse blood	Colistin Oxolinic Acid S013

### References:

Ellner P D Stoessel C I Drakeford E & Vasi F A new culture medium for medical bacteriology. Amer. J Clin Path.,29: 181-183 (1958).