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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>COLUMBIA BLOOD AGAR BASE (CM0331)</b>		

## COLUMBIA BLOOD AGAR BASE

CM0331

### Typical Formula\*

	grams per litre	
Special peptone		23.0
Soluble starch		1.0
Sodium chloride		5.0
Agar		10.0

\* adjusted as required to meet performance standards

### Directions

Suspend 39g in 1 litre of distilled water. Bring to the boil to dissolve completely. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C. Mix well and pour into sterile Petri dishes. For blood agar, enrich with 5% v/v sterile defibrinated blood.


### Physical Characteristics

Straw, free-flowing powder  
 Colour on reconstitution - straw 2-3  
 Moisture level - less than 7%  
 pH 7.3 ± 0.2 at 25°C  
 Clarity - clear  
 Gel strength - firm, comparable to 10.0g/litre of agar

The medium is tested for compatibility using 7% v/v oxalated horse blood, defibrinated horse blood and defibrinated sheep blood. There shall be no evidence of lysis or darkening, after incubation at 37°C, 25°C and 4°C for 72 hours.

### Microbiological Tests Using Optimum Inoculum Dilution

Control Medium: Columbia Blood Agar Base

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### Plain plates

#### Reactions after incubation at 37°C for 24 hours

Medium is challenged with 10-100 colony-forming units

*Staphylococcus aureus* ATCC® 25923 1-2mm cream colonies

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

#### Reactions after incubation at 37°C for 48 hours under anaerobic conditions (for details, refer to Oxoid Manual - Atmosphere Generation Systems)

Medium is challenged with 10-100 colony-forming units

*Clostridium sporogenes* ATCC® 19404 1-2mm pale straw colonies

*Clostridium sporogenes* ATCC® 11437 1-2mm pale straw colonies

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

### Enriched with 5% v/v horse blood


#### Reactions after incubation at 37°C for 24 hours

Medium is challenged with 10-100 colony-forming units

*Streptococcus pyogenes* ATCC® 19615 0.25-1mm pale straw colonies, β haemolysis

*Streptococcus pneumoniae* ATCC® 6305 0.5-1mm grey/green colonies, α haemolysis

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

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**Reactions after incubation at 37°C for 48 hours under microaerophilic conditions  
(for details, refer to Oxoid Manual - Atmosphere Generation Systems)**

*Neisseria gonorrhoeae*      NCTC 11148      1-2mm grey/brown colonies

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

**Reactions after incubation at 37°C for 18 hours**

Zones of growth/no growth surrounding X, V and X+V factor discs (DD0003, DD0004 and DD0005) when plain plates are inoculated with the following organisms and incubated at 37°C for 18 hours:

		<b>X</b>	<b>V</b>	<b>X+V</b>
<i>Haemophilus influenzae</i>	ATCC® 49247	0	0	≥ 15mm
<i>Haemophilus parainfluenzae</i>	ATCC® 33392	0	≥ 20mm	≥ 20mm

**Reactions after incubation at 37°C for 18 hours**

Zones of inhibition with Bacitracin discs (DD0002) shall be 10-20mm when 7% v/v horse blood plates are inoculated with *Streptococcus pyogenes* ATCC® 19615 and incubated at 37°C for 18 hours.


**BSAC MRSA disc diffusion**

**Reactions after incubation at 30°C for 24 hours**

Tested with the addition of 2% w/v sodium chloride

Antibiotic diffusion tests are carried out using *Staphylococcus aureus* ATCC® 9144 and *Staphylococcus aureus* MRSA NCTC 12493 and incubated at 30°C for 24 hours.

<i>Staphylococcus aureus</i>	ATCC® 9144	OX1	22-27mm
<i>Staphylococcus aureus</i>	NCTC 12493	OX1	0mm

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**Testing performed in accordance with ISO11133:2014**

**Reactions after incubation at 41.5 ± 2°C for 44 ± 4 hours**

Medium is challenged with 50-120 colony forming units

<i>Campylobacter jejuni</i>	ATCC® 29428 WDCM00156	1-3mm grey, mucoid colonies
<i>Campylobacter jejuni</i>	ATCC® 33291 WDCM00005	1-3mm grey, mucoid colonies
<i>Campylobacter coli</i>	ATCC® 43478 WDCM00004	1-3mm grey, mucoid colonies


A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium.

**Testing performed in accordance with current CLSI M22 A**

**Reactions after incubation at 35°C for 18-24 hours**

Medium is challenged with 1E+02 to 1E+04 colony forming units

<i>Streptococcus pyogenes</i>	ATCC® 19615	0.25-1mm pale straw colonies, β haemolysis
<i>Streptococcus pneumoniae</i>	ATCC® 6305	0.5-1mm grey/green colonies, α haemolysis
<i>Staphylococcus aureus</i>	ATCC® 25923	1-2mm cream colonies
<i>Escherichia coli</i>	ATCC® 25922	1-2mm cream colonies

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### Revision History

Section / Step	Description of Change	Reason for Change	Reference
Creation of CLSI M22 A section	Update to include testing of CLSI M22 A	Change control	BT-CC-1694