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OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION		
COLUMBIA BLOOD AGAR BASE (CM0331)		

COLUMBIA BLOOD AGAR BASE

CM0331

Typical Formula*

Special peptone	grams per litre	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 or equal to 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

Plain plates

Reactions after incubation at 37°C for 24 hours

Medium is challenged with 10-100 colony-forming units

<i>Staphylococcus aureus</i>	ATCC®25923	1-2mm cream colonies
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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

Medium is challenged with 10-100 colony-forming units

<i>Clostridium sporogenes</i>	ATCC®19404	1-2mm pale straw colonies
<i>Clostridium sporogenes</i>	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

<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

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 microaerophilic conditions


<i>Neisseria gonorrhoeae</i>	NCTC11148	1-2mm grey/brown colonies
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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:

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

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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.

Testing performed in accordance with ISO11133:2014

Enriched with 5% v/v sheep blood

Reactions after incubation at 41.5 ± 2°C for 44 ± 4 hours under microaerophilic conditions

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

Enriched with 5% v/v sheep blood

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	1-3mm cream colonies

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Revision History

Section / Step	Description of Change	Reason for Change	Reference
Entire document	Update to new document format and correction of minor/typographical errors	N/A	N/A
Microbiological characteristics	Removal of obsolete BSAC testing	Change control	MOC-2022-0741