

	Document Owner Department: QC	MBD-BT-SPEC-0112
		Page 1 of 3
<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>DESOXYCHOLATE CITRATE AGAR (HYNES) CM0227</b>		

**DESOXYCHOLATE CITRATE AGAR (HYNES)**

**CM0227**

**Typical Formula\***

	grams per litre	
Peptone		5.0
'Lab-Lemco' powder		5.0
Lactose		10.0
Sodium deoxycholate		5.0
Tri-sodium citrate		8.5
Sodium thiosulphate		5.4
Iron (III) citrate		1.0
Neutral red		0.02
Agar		12.0

\* adjusted as required to meet performance standards

**Directions**

Suspend 52g in 1 litre of distilled water. With frequent agitation, bring to the boil to dissolve completely. Cool to 50°C. Mix well and pour into sterile Petri dishes. DO NOT AUTOCLAVE. DO NOT OVERHEAT.

**Physical Characteristics**

Straw/pink, free-flowing powder  
 Colour on reconstitution - pink  
 Moisture level - less than or equal to 7%  
 pH 7.3 ± 0.2 at 25°C  
 Clarity - clear  
 Gel strength - firm, comparable to 12.0g/litre of agar

**Microbiological Tests Using Optimum Inoculum Dilution**

Control Medium: Tryptone Soya Agar

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

Inoculation with mixed cultures using diminishing sweep technique

Medium is challenged with 1E+03 to 1E+05 colony-forming units (cfu) of *Salmonella* spp. and *Shigella* spp. and 1E+03 to 1E+05 cfu for *Escherichia coli* ATCC®8739

<i>Salmonella typhimurium</i>	ATCC®14028	1-2mm straw colonies with black centre
<i>Shigella sonnei</i>	ATCC®25931	1-3mm irregular, straw colonies

	Document Owner Department: QC	MBD-BT-SPEC-0112
		Page 2 of 3
<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>DESOXYCHOLATE CITRATE AGAR (HYNES) CM0227</b>		

In mixed culture, a satisfactory result is represented by a positive diagnostic reaction of *Salmonella typhimurium* ATCC®14028 and *Shigella sonnei* ATCC®25931.

Inoculation with pure cultures

Medium is challenged with 10-100 colony-forming units

<i>Salmonella abony</i>	NCTC6017	1-2mm straw colonies with black centre
<i>Salmonella enteritidis</i>	ATCC®13076	1-2mm straw colonies with black centre
<i>Salmonella typhimurium</i>	ATCC®14028	1-2mm straw colonies with black centre
<i>Salmonella virchow</i>	NCTC5742	1-2mm straw colonies with black centre
<i>Salmonella nottingham</i>	NCTC7832	1-2mm straw colonies with black centre
<i>Shigella sonnei</i>	ATCC®25931	1-3mm irregular, straw colonies
<i>Shigella flexneri</i>	ATCC®12022	1-3mm irregular, straw colonies

For pure cultures of Salmonellae and Shigellae, a satisfactory result is represented by recovery equal to or greater than 50% of the control medium.

<i>Pseudomonas aeruginosa</i>	ATCC®9027	0.5-2mm straw colonies
<i>Escherichia coli</i>	ATCC®25922	No growth or 0.25-2mm pink colonies and media
<i>Escherichia coli</i>	ATCC®11775	No growth or 0.25-2mm pink colonies and media
<i>Proteus mirabilis</i>	ATCC®12453	0.5-1.5mm straw colonies with or without black centre

For pure cultures of non-Salmonellae and non-Shigellae, a satisfactory result is represented by recovery equal to or less than 90% of the control medium

Medium is challenged with greater than 1E+04 to 1E+06 colony-forming units

<i>Staphylococcus aureus</i>	ATCC®6538	No growth
<i>Enterococcus faecalis</i>	ATCC®29212	No growth

Negative strains are inhibited.

Medium is challenged with 1E+02 to 1E+03 colony-forming units

<i>Proteus mirabilis</i>	ATCC®29906	No growth or pinpoint-1.5mm straw colonies with or without black centre
--------------------------	------------	---

*Proteus mirabilis* ATCC®29906 is inhibited or shall produce at least a 1 log(10) reduction when compared to the control medium.

	Document Owner Department: QC	MBD-BT-SPEC-0112
		Page 3 of 3
<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>DESOXYCHOLATE CITRATE AGAR (HYNES) CM0227</b>		

### Revision History

Section / Step	Description of Change	Reason for Change	Reference
Entire Document	Update to new document format and correction of typographical/minor errors.	Change control	MOC-2023-0676
Microbiological Tests – Mixed cultures	Update the number of cfu that medium is challenged with for <i>E. coli</i> in mixed cultures.		