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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>FRASER SELECTIVE SUPPLEMENT SR0156E</b>		

## FRASER SELECTIVE SUPPLEMENT

SR0156E

### Formula

Vial contents (each vial is sufficient to supplement 500ml of medium)

Ammonium iron (III) citrate	250.0 mg
Nalidixic acid	10.0 mg
Acriflavine hydrochloride	12.5 mg

### Description

A selective supplement for the detection of *Listeria monocytogenes*.

### Directions

Aseptically add 5ml of 1:1 ethanol:sterile distilled water to 1 vial and mix gently to dissolve. Aseptically add the vial contents to 500ml of sterile Fraser Broth Base (CM0895) prepared as directed and cooled to 50°C. Mix well and aseptically dispense into sterile containers.

### Physical Characteristics

Orange/green pellet  
Sterility - passes test

### Microbiological Tests Using Optimum Inoculum Dilution


Control Media: Chromogenic Listeria Agar (CM1084) or Columbia Blood Agar Base (CM0331) enriched with 5% v/v horse blood, where appropriate.

Tested with the addition of Fraser Selective Supplement SR0156

### Reactions after incubation at 37 ± 2°C for 24 ± 2 hours

Inoculate 10ml quantities of medium to achieve 1-10 colony-forming units/ml (cfu/ml) of *Listeria* spp. Incubate broths at 37 ± 2°C for 24 ± 2 hours. Subculture onto Chromogenic Listeria Agar (ISO) (CM1084 + SR0226 & SR0228) and incubate plates at 37 ± 2°C for 24 - 48 hours.

<i>Listeria monocytogenes</i>	ATCC® 7644
<i>Listeria monocytogenes</i>	ATCC® 13932

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A satisfactory result is represented by recovery of positive strains equal to or greater than a 3 log(10) increase.

Positive strains shall produce aesculin hydrolysis after 48 hours.

#### Reactions after incubation at 37 ± 2°C for 48 ± 2 hours

Inoculate 10ml quantities of medium to achieve 1E+03 to 1E+04 cfu/ml. Incubate broths at 37°C for 48 hours.

*Bacillus cereus*                      ATCC® 10876                      No aesculin hydrolysis (no blackening)

Negative strains shall produce no aesculin hydrolysis after 48 hours.

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

##### Inoculation with mixed cultures

Inoculate 10ml quantities of medium to achieve 1 – 10 colony-forming units/ml (cfu/ml) of *Listeria spp.*, to each add 1E+02 to 1E+03 cfu/ml of *Escherichia coli* and 1E+02 to 1E+03 cfu/ml of *Enterococcus faecalis*. Incubate broths at 37 ± 2°C for 24 ± 2 hours. Subculture onto Chromogenic Listeria Agar (ISO) (CM1084 + SR0226 & SR0228) and incubate plates at 37 ± 2°C for 24 ± 2 hours

##### Reactions after incubation at 37 ± 2°C for 24 ± 2 hours

<i>Listeria monocytogenes</i>	ATCC® 13932	WDCM00021	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth
<i>Listeria monocytogenes</i>	ATCC® 13932	WDCM00021	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth
<i>Listeria monocytogenes</i>	ATCC® 13932	WDCM00021	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth
<i>Listeria monocytogenes</i>	ATCC® 13932	WDCM00021	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth

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<i>Listeria monocytogenes</i>	ATCC® 35152	WDCM00109	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth
<i>Listeria monocytogenes</i>	ATCC® 35152	WDCM00109	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth
<i>Listeria monocytogenes</i>	ATCC® 35152	WDCM00109	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth
<i>Listeria monocytogenes</i>	ATCC® 35152	WDCM00109	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth

A satisfactory result is represented by recovery of >10 cfu of *Listeria monocytogenes* on Chromogenic Listeria Agar (ISO) (CM1084).

#### Inoculation with pure cultures

Inoculate 10ml quantities of medium to achieve 1E+03 to 1E+04 colony-forming units/ml (cfu/ml) of *Escherichia coli* and *Enterococcus faecalis*. Incubate broths at 37 ± 2°C for 24 ± 2 hours. Subculture onto Chromogenic Listeria Agar (ISO) (CM1084 + SR0226 & SR0228) and Tryptone Soya Agar (CM0131) then incubate plates at 37 ± 2°C for 24 ± 2 hours.

#### Reactions after incubation at 37 ± 2°C for 24 ± 2 hours


<i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth (CM1084)
<i>Escherichia coli</i>	ATCC® 8739	WDCM00012	Cream colonies (CM0131)
<i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth (CM1084)
<i>Escherichia coli</i>	ATCC® 25922	WDCM00013	Cream colonies (CM0131)
<i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth (CM1084)
<i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	Cream colonies (CM0131)
<i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth (CM1084)
<i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	Cream colonies (CM0131)

A satisfactory result is represented by no growth of *Escherichia coli* and *Enterococcus faecalis* on Chromogenic Listeria Agar (ISO) (CM1084) and <100 cfu on Tryptone Soya Agar (CM0131).

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<b>FRASER SELECTIVE SUPPLEMENT SR0156E</b>		

### Revision History

Section / Step	Description of Change	Reason for Change	Reference
Entire Document	Update to test specification	Change control	BT-CC-1533

	Document Owner Department: QC	BT-SPEC-0491
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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>LISTERIA SELECTIVE SUPPLEMENT (OXFORD FORMULATION) SR0140E</b>		

**LISTERIA SELECTIVE SUPPLEMENT (OXFORD FORMULATION)**

**SR0140E**

**Formula**

Vial contents (each vial is sufficient to supplement 500ml of medium)

Cycloheximide	200.0 mg
Colistin sulphate	10.0 mg
Acriflavine	2.5 mg
Cefotetan	1.0 mg
Fosfomycin	5.0 mg

**Description**

A selective supplement for the isolation of *Listeria monocytogenes*.

**Directions**

Aseptically add 5ml of 70% ethanol to 1 vial and mix gently to dissolve. Avoid frothing. Aseptically add the vial contents to 500ml of sterile Listeria Selective Agar Base (CM0856) prepared as directed and cooled to 50°C. Mix well and pour into sterile Petri dishes.

**Physical Characteristics**

Yellow powder/pellet  
Sterility - passes test

**Microbiological Tests Using Optimum Inoculum Dilution**

Control Medium: Columbia Blood Agar Base enriched with 5% v/v horse blood


**Reactions after incubation at 37°C for 48 hours**

Tested in Listeria Selective Agar Base CM0856

Medium is challenged with 10-100 colony-forming units

<i>Listeria monocytogenes</i>	ATCC®7644	0.25-1.0mm brown/black dimpled colonies and halo
<i>Listeria monocytogenes</i>	ATCC®13932	0.25-1.0mm brown/black dimpled colonies and halo

A satisfactory result is represented by recovery of positive strains equal to or greater than 50% of the control medium.

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<b>LISTERIA SELECTIVE SUPPLEMENT (OXFORD FORMULATION) SR0140E</b>		

Medium is challenged with 10-100 colony-forming units

*Staphylococcus aureus* ATCC®25923 No growth or pinpoint-1.5mm yellow colonies

*Staphylococcus aureus* ATCC®25923 is inhibited or shall produce a negative diagnostic reaction from an inoculum of 10-100 cfu.

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

*Enterococcus faecalis* ATCC®29212 No growth


*Enterococcus faecalis* ATCC®19433 No growth

*Escherichia coli* ATCC®25922 No growth

*Escherichia coli* ATCC®8739 No growth


*Candida albicans* ATCC®10231 No growth or minimal growth

Negative strains are inhibited. *Candida albicans* ATCC®10231 shall be inhibited or produce pinpoint colourless colonies with no blackening of the media.

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<b>LISTERIA SELECTIVE SUPPLEMENT (OXFORD FORMULATION) SR0140E</b>		

### Revision History

Section / Step	Description of Change	Reason for Change	Reference
Microbiological characteristics	Change to <i>Staphylococcus aureus</i> growth characteristics	Change control	MOC-2022-0180

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>BRILLIANCE™ LISTERIA AGAR BASE (ISO) CM1212</b>		

**BRILLIANCE™ LISTERIA AGAR BASE (ISO)**
**CM1212**
**Typical Formula\***

Enzymatic digest of animal tissues	grams per litre	18.0
Enzymatic digest of casein		6.0
Yeast extract		10.0
Sodium pyruvate		2.0
Glucose		2.0
Magnesium glycerophosphate		1.0
Magnesium sulphate (anhydrous)		0.5
Sodium chloride		5.0
Lithium chloride		10.0
Di-sodium hydrogen phosphate (anhydrous)		2.5
5-Bromo-4-chloro-3-indolyl-β-D-glucopyranoside		0.05
Agar		12.0

\* adjusted as required to meet performance standards


**Directions**

Suspend 34.5g in 480ml of distilled water. Mix well and sterilize by autoclaving at 121°C for 15 minutes. Cool to 48°C. Aseptically add the contents of 1 vial of Brilliance™ Listeria Selective Supplement (ISO) (SR0257E) reconstituted as directed, and 1 vial of Brilliance™ Listeria Differential Supplement (ISO) (SR0258E) warmed to 48°C. Mix well and pour into sterile Petri dishes.

**Physical Characteristics**

Straw, free-flowing powder  
Colour on reconstitution - orange/brown  
Moisture level - less than or equal to 7%  
pH 7.2 ± 0.2 at 25°C  
Clarity - clear  
Gel strength - firm, comparable to 12.0g/litre of agar



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<b>BRILLIANCE™ LISTERIA AGAR BASE (ISO) CM1212</b>		

### Microbiological Tests Using Optimum Inoculum Dilution

Control Media: Tryptone Soya Agar, Columbia Blood Agar Base enriched with 5% v/v horse blood or Sabouraud Dextrose Agar, where appropriate

Tested with the addition of Brilliance™ Listeria Selective Supplement (ISO) SR0257 and Brilliance™ Listeria Differential Supplement (ISO) SR0258

### Reactions after incubation at 37 ± 2°C for 24 ± 2 hours

Medium is challenged with 30-120 colony-forming units

<i>Listeria monocytogenes</i>	NCTC11994	0.5-2mm blue-green colonies with halo
<i>Listeria monocytogenes</i>	ATCC®7644	0.5-2mm blue-green colonies with halo

A satisfactory result is represented by recovery of positive strains equal to or greater than 50% of the control medium.

### Reactions after incubation at 37 ± 2°C for 48 ± 4 hours

Medium is challenged with 30-120 colony-forming units

<i>Listeria monocytogenes</i>	NCTC11994	1-3mm blue-green colonies with halo
<i>Listeria monocytogenes</i>	ATCC®7644	1-3mm blue-green colonies with halo
<i>Listeria ivanovii</i>	NCTC12701	0.5-3mm blue-green colonies with or without halo

A satisfactory result is represented by recovery of positive strains equal to or greater than 70% of the control medium. For *Listeria ivanovii* NCTC12701, a satisfactory result is represented by recovery equal to or greater than 50% of the control medium.

Medium is challenged with 1E+04 to 1E+05 colony-forming units


<i>Bacillus cereus</i>	ATCC®10876	No growth or 1-2mm cream/blue colonies
<i>Staphylococcus aureus</i>	ATCC®25923	No growth or 0.5-1mm yellow colonies
<i>Saccharomyces cerevisiae</i>	ATCC®9763	No growth or 1-2mm cream/blue colonies

Negative strains are inhibited or shall produce at least a 2 log(10) reduction when compared to the control medium.

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

<i>Proteus mirabilis</i>	NCTC10975	No growth
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Negative strains are inhibited.

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

Table B.1

ISO Standard 11290-1:2017 tested with the addition of Brilliance™ Listeria Selective Supplement (ISO) SR0257 and Brilliance™ Listeria Differential Supplement (ISO) SR0258

**Reactions after incubation at 37 ± 2°C for 24 ± 2 hours**

Medium is challenged with 50-120 colony-forming units

*Listeria monocytogenes*      ATCC®13932    WDCM00021    0.5-2mm blue-green colonies with halo

A satisfactory result is represented by recovery of positive strains equal to or greater than 50% of the control medium.

**Reactions after incubation at 37 ± 2°C for 48 ± 4 hours**

Medium is challenged with 50-120 colony-forming units

*Listeria monocytogenes*      ATCC®13932    WDCM00021    1-3mm blue-green colonies with halo  
*Listeria monocytogenes*      ATCC®35152    WDCM00109    1-3mm blue-green colonies with halo

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

Medium is challenged with 1E+03 to 1E+04 colony-forming units


*Listeria innocua*                      ATCC®33090    WDCM00017    0.5-3mm blue-green colonies without halo

A satisfactory result is represented by good growth with a negative diagnostic reaction.

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


*Escherichia coli*                      ATCC®25922    WDCM00013    No growth  
*Escherichia coli*                      ATCC®8739      WDCM00012    No growth  
*Enterococcus faecalis*              ATCC®29212    WDCM00087    No growth  
*Enterococcus faecalis*              ATCC®19433    WDCM00009    No growth

Negative strains are inhibited.

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<b>BRILLIANCE™ LISTERIA AGAR BASE (ISO) CM1212</b>		

### Revision History

Section / Step	Description of Change	Reason for Change	Reference
Physical Characteristics	Clarity change from opaque to clear	Change control	MOC-2023-0118

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>FRASER BROTH BASE (ISO) (CM0895)</b>		

## FRASER BROTH BASE (ISO)

CM0895

### Typical Formula\*

	grams per litre	
Proteose peptone		5.0
Tryptone		5.0
Meat extract		5.0
Yeast extract		5.0
Sodium chloride		20.0
Di-sodium hydrogen phosphate		12.0
Potassium dihydrogen phosphate		1.35
Aesculin		1.0
Lithium chloride		3.0

\* adjusted as required to meet performance standards

### Directions

#### To make Half Fraser Broth

Dissolve 12.9g in 225ml of distilled water. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C and aseptically add the contents of 1 vial of Half Fraser Selective Supplement (SR0166E) reconstituted as directed. Mix well and dispense into sterile containers.

Alternatively, dissolve 129.2g in 2.25 litres of distilled water. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C and aseptically add the contents of 1 vial of Half Fraser Selective Supplement (SR0166G) reconstituted as directed. Mix well and dispense into sterile containers.

#### To make Fraser Broth

Dissolve 28.7g in 500ml of distilled water. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C and aseptically add the contents of 1 vial of Fraser Selective Supplement (SR0156E) reconstituted as directed. Mix well and dispense into sterile containers.

### Physical Characteristics


Straw, free-flowing powder

Colour on reconstitution - straw 2-3

Moisture level - less than 7%

pH 7.2 ± 0.2 at 25°C

Clarity - clear

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>FRASER BROTH BASE (ISO) (CM0895)</b>		

### Microbiological Tests Using Optimum Inoculum Dilution

Control Media: Chromogenic Listeria Agar (CM1084) or Columbia Blood Agar Base (CM0331) enriched with 5% v/v horse blood, where appropriate.

Tested with the addition of Fraser Selective Supplement SR0156

### Reactions after incubation at 37 ± 2°C for 24 ± 2 hours

Inoculate 10ml quantities of medium to achieve 1-10 colony-forming units/ml (cfu/ml) of *Listeria* spp. Incubate broths at 37 ± 2°C for 24 ± 2 hours. Subculture onto Chromogenic Listeria Agar (ISO) (CM1084 + SR0226 & SR0228) and incubate plates at 37 ± 2°C for 24 - 48 hours.

<i>Listeria monocytogenes</i>	ATCC® 7644
<i>Listeria monocytogenes</i>	ATCC® 13932

A satisfactory result is represented by recovery of positive strains equal to or greater than a 3 log(10) increase.

Positive strains shall produce aesculin hydrolysis after 48 hours.

### Reactions after incubation at 37 ± 2°C for 48 ± 2 hours

Inoculate 10ml quantities of medium to achieve 1E+03 to 1E+04 cfu/ml. Incubate broths at 37°C for 48 hours.


<i>Bacillus cereus</i>	ATCC® 10876	No aesculin hydrolysis (no blackening)
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Negative strains shall produce no aesculin hydrolysis after 48 hours.

### Testing performed in accordance with ISO11133:2014

#### Inoculation with mixed cultures


Inoculate 10ml quantities of medium to achieve 1 – 10 colony-forming units/ml (cfu/ml) of *Listeria* spp., to each add 1E+02 to 1E+03 cfu/ml of *Escherichia coli* and 1E+02 to 1E+03 cfu/ml of *Enterococcus faecalis*. Incubate broths at 37 ± 2°C for 24 ± 2 hours. Subculture onto Chromogenic Listeria Agar (ISO) (CM1084 + SR0226 & SR0228) and incubate plates at 37 ± 2°C for 24 ± 2 hours

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**Reactions after incubation at 37 ± 2°C for 24 ± 2 hours**

<i>Listeria monocytogenes</i>	ATCC® 13932	WDCM00021	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth
<i>Listeria monocytogenes</i>	ATCC® 13932	WDCM00021	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth
<i>Listeria monocytogenes</i>	ATCC® 13932	WDCM00021	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth
<i>Listeria monocytogenes</i>	ATCC® 13932	WDCM00021	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth
<i>Listeria monocytogenes</i>	ATCC® 35152	WDCM00109	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth
<i>Listeria monocytogenes</i>	ATCC® 35152	WDCM00109	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth
<i>Listeria monocytogenes</i>	ATCC® 35152	WDCM00109	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth
<i>Listeria monocytogenes</i>	ATCC® 35152	WDCM00109	0.5-1.0mm blue colonies with halo
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth

A satisfactory result is represented by recovery of >10 cfu of *Listeria monocytogenes* on Chromogenic Listeria Agar (ISO) (CM1084).

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<b>FRASER BROTH BASE (ISO) (CM0895)</b>		


### Inoculation with pure cultures

Inoculate 10ml quantities of medium to achieve 1E+03 to 1E+04 colony-forming units/ml (cfu/ml) of *Escherichia coli* and *Enterococcus faecalis*. Incubate broths at 37 ± 2°C for 24 ± 2 hours. Subculture onto Chromogenic Listeria Agar (ISO) (CM1084 + SR0226 & SR0228) and Tryptone Soya Agar (CM0131) then incubate plates at 37 ± 2°C for 24 ± 2 hours.

### Reactions after incubation at 37 ± 2°C for 24 ± 2 hours

<i>Escherichia coli</i>	ATCC® 8739	WDCM00012 No growth (CM1084)
<i>Escherichia coli</i>	ATCC® 8739	WDCM00012 Cream colonies (CM0131)
<i>Escherichia coli</i>	ATCC® 25922	WDCM00013 No growth (CM1084)
<i>Escherichia coli</i>	ATCC® 25922	WDCM00013 Cream colonies (CM0131)
<i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009 No growth (CM1084)
<i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009 Cream colonies (CM0131)
<i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087 No growth (CM1084)
<i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087 Cream colonies (CM0131)


A satisfactory result is represented by no growth of *Escherichia coli* and *Enterococcus faecalis* on Chromogenic Listeria Agar (ISO) (CM1084) and <100 cfu on Tryptone Soya Agar (CM0131).

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<b>FRASER BROTH BASE (ISO) (CM0895)</b>		

### Revision History

Section / Step	Description of Change	Reason for Change	Reference
N/A	Update to ISO	Change control	BT-CC-1903



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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>RAPPAPORT-VASSILIADIS SOYA PEPTONE (RVS) BROTH CM0866</b>		

**RAPPAPORT-VASSILIADIS SOYA PEPTONE (RVS) BROTH**

**CM0866**

**Typical Formula\***

Soya peptone	grams per litre	4.5
Sodium chloride		7.2
Potassium dihydrogen phosphate		1.26
Di-potassium hydrogen phosphate		0.18
Magnesium chloride (anhydrous)		13.58
Malachite green		0.036


\* adjusted as required to meet performance standards

**Directions**

Suspend 26.75 g in 1 litre of distilled water. Heat gently until dissolved completely. Mix well and distribute into final containers. Sterilize by autoclaving at 115°C for 15 minutes. This medium is very hygroscopic and must be protected from moisture.

**Physical Characteristics**

Straw/green, free-flowing coarse powder  
 Colour on reconstitution - blue  
 Moisture level - less than 7%  
 pH 5.2 ± 0.2 at 25°C  
 Clarity - clear

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>RAPPAPORT-VASSILIADIS SOYA PEPTONE (RVS) BROTH CM0866</b>		

### Microbiological Tests Using Optimum Inoculum Dilution

Control Media: Tryptone Soya Agar and XLD Medium

### Reactions after incubation at 41 ± 2°C for 24 ± 3 hours

Inoculation with pure cultures

Inoculate 10ml quantities of medium to achieve 1-15 colony-forming units/ml (cfu/ml). Incubate broths at 41 ± 2°C for 24 ± 3 hours. After incubation, subculture onto Tryptone Soya Agar (CM0131) and incubate plates at 37 ± 2°C for 24 ± 3 hours.


<i>Salmonella nottingham</i>	NCTC 7832	1-3mm straw colonies
<i>Salmonella abony</i>	NCTC 6017	1-3mm straw colonies
<i>Salmonella poona</i>	NCTC 4840	1-3mm straw colonies

A satisfactory result is represented by recovery of *Salmonella* strains equal to or greater than a 4 log (10) increase.

Inoculate 10ml quantities of medium to achieve 1E+02 to 1E+04 cfu/ml. Incubate broths at 41 ± 2°C for 24 ± 3 hours. After incubation, subculture onto Tryptone Soya Agar (CM0131) and incubate plates at 37 ± 2°C for 24 ± 3 hours.

<i>Staphylococcus aureus</i>	ATCC® 6538	No growth
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Negative strains are inhibited or shall produce at least a 2 log (10) reduction.

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>RAPPAPORT-VASSILIADIS SOYA PEPTONE (RVS) BROTH CM0866</b>		

Testing performed in accordance with ISO11133:2014

Reactions after incubation at 41.5 ± 2°C for 24 ± 3 hours

Inoculation with mixed cultures

Inoculate 10ml quantities of medium to achieve 1-10 cfu/ml of *Salmonella* species, to each add 1E+03 to 1E+04 cfu/ml of *Escherichia coli* and *Pseudomonas aeruginosa*. Incubate broths at 41 ± 2°C for 24 ± 3 hours. After incubation, subculture onto XLD Medium (CM0469) and incubate plates at 37 ± 2°C for 24 ± 3 hours.


<i>Salmonella typhimurium</i>	ATCC® 14028	WDCM00031	1-2mm red colonies, black centre
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Pseudomonas aeruginosa</i>	ATCC® 27853	WDCM00025	No growth

<i>Salmonella typhimurium</i>	ATCC® 14028	WDCM00031	1-2mm red colonies, black centre
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Pseudomonas aeruginosa</i>	ATCC® 27853	WDCM00025	No growth

<i>Salmonella enteritidis</i>	ATCC® 13076	WDCM00030	1-2mm red colonies, black centre
+ <i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth
+ <i>Pseudomonas aeruginosa</i>	ATCC® 27853	WDCM00025	No growth

<i>Salmonella enteritidis</i>	ATCC® 13076	WDCM00030	1-2mm red colonies, black centre
+ <i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth
+ <i>Pseudomonas aeruginosa</i>	ATCC® 27853	WDCM00025	No growth

A satisfactory result is represented by recovery of >100 cfu of *Salmonella* species on XLD Medium (CM0469).


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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>RAPPAPORT-VASSILIADIS SOYA PEPTONE (RVS) BROTH CM0866</b>		

Inoculation with pure cultures

Inoculate 10ml quantities of medium to achieve 1E+03 to 1E+04 cfu/ml of *Escherichia coli* and *Enterococcus faecalis*. Incubate broths at 41 ± 2°C for 24 ± 3 hours. After incubation, subculture onto Tryptone Soya Agar (CM0131) and incubate plates at 37 ± 2°C for 24 ± 3 hours.

<i>Escherichia coli</i>	ATCC® 8739	WDCM00012	No growth or 1-3mm cream colonies
<i>Escherichia coli</i>	ATCC® 25922	WDCM00013	No growth or 1-3mm cream colonies
<i>Enterococcus faecalis</i>	ATCC® 19433	WDCM00009	No growth or 0.5-1mm straw colonies
<i>Enterococcus faecalis</i>	ATCC® 29212	WDCM00087	No growth or 0.5-1mm straw colonies

A satisfactory result is represented by growth of ≤100 cfu for *Escherichia coli* and <10 cfu for *Enterococcus faecalis* on Tryptone Soya Agar (CM0131).

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>RAPPAPORT-VASSILIADIS SOYA PEPTONE (RVS) BROTH CM0866</b>		

### Revision History

Section / Step	Description of Change	Reason for Change	Reference
Creation of ISO11133 section	Update to include testing of ISO11133:2014	Change control	BT-CC-1411

**OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION**
**LISTERIA SELECTIVE AGAR BASE (OXFORD FORMULATION) CM0856**
**LISTERIA SELECTIVE AGAR BASE (OXFORD FORMULATION)**
**CM0856**
**Typical Formula\***

grams per litre

Columbia Blood Agar Base	39.0
Aesculin	1.0
Ferric ammonium citrate	0.5
Lithium chloride	15.0

\* adjusted as required to meet performance standards

**Directions**

Suspend 27.75g in 500ml of distilled water. Bring to the boil to dissolve completely. Sterilize by autoclaving at 121°C for 15 minutes. Cool to 50°C and aseptically add the contents of 1 vial of Listeria Selective Supplement (SR0206E or SR0140E) reconstituted as directed. Mix well and pour into sterile Petri dishes.

**Physical Characteristics**

Straw, free-flowing powder  
 Colour on reconstitution - pale green  
 Moisture level - less than or equal to 7%  
 pH - 7.0 ± 0.2 at 25°C  
 Clarity - clear  
 Gel strength - firm, comparable to 10.0g/litre of agar

**Microbiological Tests Using Optimum Inoculum Dilution**

Control Medium: Columbia Blood Agar Base enriched with 5% v/v horse blood

**Reactions after incubation at 37°C for 48 hours**

Tested with the addition of Listeria Selective Supplement (Oxford Formulation) SR0140

Medium is challenged with 10-100 colony-forming units

<i>Listeria monocytogenes</i>	ATCC® 7644	0.25-1.0mm brown/black dimpled colonies and halo
<i>Listeria monocytogenes</i>	ATCC® 13932	0.25-1.0mm brown/black dimpled colonies and halo

A satisfactory result is represented by recovery of positive strains equal to or greater than 50% of the control medium.

**OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION**

**LISTERIA SELECTIVE AGAR BASE (OXFORD FORMULATION) CM0856**

Medium is challenged with 10-100 colony-forming units

*Staphylococcus aureus* ATCC®25923 No growth or pinpoint-1.5mm yellow colonies

*Staphylococcus aureus* ATCC®25923 is inhibited or shall produce a negative diagnostic reaction from an inoculum of 10-100 cfu

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

*Enterococcus faecalis* ATCC®29212 No growth


*Enterococcus faecalis* ATCC®19433 No growth

*Escherichia coli* ATCC®25922 No growth

*Escherichia coli* ATCC®8739 No growth

*Candida albicans* ATCC®10231 No growth or minimal growth


Negative strains are inhibited. *Candida albicans* ATCC®10231 shall be inhibited or produce pinpoint colourless colonies with no blackening of the media.

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>LISTERIA SELECTIVE AGAR BASE (OXFORD FORMULATION) CM0856</b>		

### Revision History

Section / Step	Description of Change	Reason for Change	Reference
Microbiological characteristics	Change to <i>Staphylococcus aureus</i> growth characteristics	Change control	MOC-2022-0180



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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>MAXIMUM RECOVERY DILUENT CM0733</b>		

**MAXIMUM RECOVERY DILUENT** **CM0733**

**Typical Formula\***

Peptone	grams per litre	1.0
Sodium chloride		8.5

\* adjusted as required to meet performance standards

**Directions**

Dissolve 9.5g in 1 litre of distilled water. Dispense into final containers and sterilize by autoclaving at 121°C for 15 minutes.

**Physical Characteristics**

- Straw, free-flowing powder
- Colour on reconstitution - colourless
- Moisture level - less than or equal to 7%
- pH 7.0 ± 0.2 at 25°C
- Clarity - clear

**Microbiological Tests using Optimum Inoculum Dilution**

Control Media: Tryptone Soya Agar or Columbia Blood Agar Base enriched with 5% v/v horse blood, where appropriate.

Tested as a diluent

Inoculate 9ml of the medium with 1ml of the test organism containing greater than or equal to 2E+04 cfu/ml. At time zero (0 minutes) and after holding at 20-25°C for 45 minutes to 1 hour, subculture onto control medium.

**Anaerobic incubation at 37 ± 2°C for 18 ± 2 hours**

Medium is challenged with 20-120 colony-forming units (cfu)

*Clostridium perfringens*      ATCC®13124      2-4mm grey colonies

A satisfactory result is represented by recovery of ± 30% of the Control cfu (0 minutes) after holding at 20-25°C for 45 minutes.

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>MAXIMUM RECOVERY DILUENT CM0733</b>		


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

**Reactions after incubation at 37 ± 2°C for 18 ± 2 hours**

Medium is challenged with 50-150 colony-forming units

<i>Escherichia coli</i>	ATCC®8739	WDCM00012	1-2mm white/grey colonies
<i>Escherichia coli</i>	ATCC®25922	WDCM00013	1-2mm white/grey colonies
<i>Staphylococcus aureus</i>	ATCC®25923	WDCM00034	0.5-1mm white/grey colonies

A satisfactory result is represented by recovery of ± 30% of the Control cfu (0 minutes) after holding at 20-25°C for 45 minutes.

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<b>OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION</b>		
<b>MAXIMUM RECOVERY DILUENT CM0733</b>		

## Revision History

Section / Step	Description of Change	Reason for Change	Reference
Creation of ISO11133 section	Update to include testing of ISO11133:2014	Change control	BT-CC-1268
Entire Document	Update to new document format and correction of typographical/minor errors. Removal of Oxoid Manual	Change control	BT-CC-2263