

# BPLS Agar

## (Brilliant-green Phenol-red Lactose Sucrose Agar)

Selective culture medium for the isolation of Salmonella with the exception of *S. typhosa* and *Shigella* from pathological material, faeces, urine, foodstuffs etc.



*in vitro diagnosticum –  
For professional use only*



### Principle

Microbiological method

### Mode of Action

This culture medium contains lactose, whose degradation to acid is indicated by the pH indicator phenol red, which changes its colour to yellow. The indicator exhibits a deep red colour in the alkaline range. The growth of the accompanying Gram-positive microbial flora, *Salmonella typhi* and *Shigella* is largely inhibited by brilliant green. The growth of *Salmonella* is, however, improved by the richer nutrient base. Increased growth of accompanying microorganisms is considerably prevented by raising the concentration of brilliant green. *Salmonellae* are not able to ferment either lactose or sucrose. Thus in contrast to BPL agar, the sucrose contained in this medium allows identification of accompanying, weakly lactose-positive or lactose-negative, but sucrose-positive microorganisms.

### Typical Composition (g/litre)

Peptone from meat 5.0; peptone from casein 5.0; meat extract 5.0; sodium chloride 3.0; di-sodium hydrogen phosphate 2.0; lactose 10.0; sucrose 10.0; phenol red 0.08; brilliant green 0.0125; agar-agar 12.0.

### Preparation and Storage

Usable up to the expiry date when stored dry and tightly closed at +15 to +25°C. Protect from light.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25°C.

Suspend 57 g/litre, autoclave (15 min at 121°C), pour plates.

pH: 6.9 ± 0.2 at 25 °C.

The plates are clear and red.

### Specimen

e.g. Stool, urine .Clinical specimen collection, handling and processing, see general instructions of use.

See also *General Instruction of Use*  
Warnings and precautions see *ChemDAT®*  
([www.chemdat.info](http://www.chemdat.info))

### Experimental Procedure and Evaluation

Inoculate the plates with the sample material itself or material taken from an enriched culture. Tests should also be performed with less inhibitory culture media.

Incubation: 24 hours at 35 °C aerobically.

Appearance of Colonies	Microorganisms
Pink surrounded by a red zone	Lactose- and sucrose-negative: <i>Salmonella</i> and others
Yellow-green surrounded by a yellow-green zone	Lactose- or sucrose-positive: <i>E.coli</i> , <i>Citrobacter</i> , <i>Proteus vulgaris</i> , <i>Klebsiella</i> and others. Occasionally complete inhibition of growth.

### Ordering Information

Product	Merck Cat. No.	Pack size
BPLS Agar (Brilliant-green Phenol-red Lactose Sucrose Agar)	1.07237.0500	500 g
Merckoplate® BPLS Agar	1.15164.0001	1 x 20 plates

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## Quality control (spiral plating method)

Test strains	Inoculum(cfu/ml)	Recovery rate (%)	Colony colour	Culture medium
Salmonella typhimurium ATCC 14028	$10^3$ - $10^5$	$\geq 70$	pink	red
Salmonella choleraesius ATCC 13312	$10^3$ - $10^5$	$\geq 70$	pink	red
Salmonella enteritidis NCTC 5188	$10^3$ - $10^5$	$\geq 70$	pink	red
Escherichia coli ATCC 25922	$10^3$ - $10^5$	$\geq 70$	yellow	yellow
Proteus vulgaris ATCC 13315	$10^3$ - $10^5$	$\geq 70$	yellow	yellow
Staphylococcus aureus ATCC 25923	$10^3$ - $10^5$	not limited	yellow	yellow
Enterococcus faecalis ATCC 33186	$10^3$ - $10^5$	not limited	yellow	yellow
Bacillus subtilis ATCC 6633	$10^3$ - $10^5$	not limited	orange / yellow	yellow



Escherichia coli  
ATCC 25922



Salmonella typhimurium  
ATCC 14028