



PRODUCT SPECIFICATION

Product Name	Brilliance™ Staph 24 Agar
Product Code	PO5304A

Form of Product	Poured plate
Storage	6 – 12°C, dark
Filling weight	17 g ± 5 %
Packaging	10 plates wrapped in film
pH	7.2 ± 0.2
Colour	Ivory, transparent
Shelf life	8 weeks
Intended Usage	A selective, chromogenic medium for isolation and enumeration of coagulase-positive staphylococci in foods. For professional use only.
Technique	Depends on the different methods. For information see Product Information.

Typical Formulation*	grams per litre
Peptones	21.0
Sodium pyruvate	4.0
Lithium chloride	5.0
Chromogenic mix	5.0
Antibiotic mix	0.04
Agar	14.0

* Adjusted as required to meet performance standards.

Quality Control

1. Control for general characteristics, labelling and printing.
2. Control for sterility
≥ 72 h @ 25 ± 1°C, aerobic
≥ 72 h @ 36 ± 1°C, aerobic
3. Biological control
Inoculum size for productivity: 10 – 100 cfu per plate
Inoculum size for selectivity: 10⁴ – 10⁵ cfu per plate

Incubation conditions: 20 - 24 h @ 36 ± 1°C, aerobic

Control Strain	Growth
<i>Staphylococcus aureus</i> ATCC® 6538 <i>Staphylococcus aureus</i> ATCC® 25923 <i>Staphylococcus saprophyticus</i> ATCC® 15305 <i>Escherichia coli</i> ATCC® 25922 <i>Bacillus cereus</i> ATCC® 11778	1 - 1.5 mm, blue colonies. 0.5 - 1 mm, blue colonies. 0.5 - 1 mm, white colonies. Complete inhibition (≤ 10 cfu). Complete inhibition (≤ 10 cfu).

ATCC® is a registered trademark of American Type Culture Collection.

Complies to ISO 16140 standard against the reference method ISO 6888.

PRODUCT INFORMATION

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Background

Staphylococci are found in a broad range of foods, including meat, dairy and bakery products as well as ready-to-eat foods. Humans and animals remain the primary source of these organisms, and they can be easily transferred to food through poor hygiene and handling practices.

Many *Staphylococcus* spp. can produce some form of enterotoxin, the causative agent of staphylococcal enteritis. There is a strong correlation between the production of these enterotoxins and coagulase activity, which is used as marker of pathogenicity. When coagulase-positive staphylococci (CPS) are present in a food in low numbers, they pose a limited risk of infection; however, if food is stored incorrectly, numbers can grow to exceed 1×10^5 CFU/g. Under these circumstances, sufficient enterotoxin can be generated to induce nausea, vomiting and stomach cramps.

There are EU regulations on acceptable limits of staphylococci in cheese, milk powder and shellfish. Levels exceeding 1×10^5 CFU/g are considered dangerous, therefore producers need to demonstrate that their products contain levels lower than this concentration.

Description

Brilliance Staph 24 Agar is designed for the presumptive identification and enumeration of CPS in food. Selective agents inhibit the growth of Gram-negative flora and nontarget Gram-positive organisms. A chromogen specifically activated by CPS colours positive colonies blue, while coagulase-negative staphylococci are inhibited or remain colourless.

Method of use

1. Prepare samples in accordance with ISO 6887¹, ISO 8261² or the appropriate standard.
2. Prepare required number of dilutions in a suitable diluent, such as Buffered Peptone Water ISO (CM1049) or Maximum Recovery Diluent (CM0733).
3. In duplicate, spread 0.1ml aliquots of required dilutions over plates until absorbed.
4. Incubate the inverted dishes aerobically at $37^\circ\text{C} \pm 1^\circ\text{C}$ for $24\text{h} \pm 2\text{h}$ and then count blue colonies.
5. Confirm by Staphylect plus (DR0850), Staphylase-Test (DR0595), Dryspot™ Staphylect Plus (DR0100) or alternatively by using tube coagulase test.
6. Report number of CPS per gram of food.

Limitations

Brilliance Staph 24 Agar is light sensitive and therefore has to be stored in dark. It must not be used beyond the stated expiry date, or if the product shows any sign of deterioration. Media should be validated by the end-user, under local conditions. Identifications on *Brilliance* Staph 24 Agar are presumptive and should be confirmed.

This product is not suitable for testing sugar-snap peas as this food is not covered by the ISO 16140 accreditation.

References

1. ISO 6887-1:1999 Microbiology of food and animal feeding stuffs - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination.
2. ISO 8261:2001 Milk and milk products - General guidance for the preparation of test samples, initial suspensions and decimal dilutions for microbiological examination.