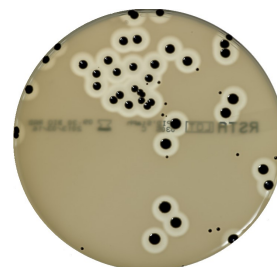


RAPID' Staph

Ref# Description
Pre-poured
3563960 90 mm x 20 dishes

Dehydrated base
3564704 500 g



FIELD OF APPLICATION

Medium used for the enumeration of coagulase-positive Staphylococci (*Staphylococcus aureus* and other species) at 37°C in 24 hr in products intended for human or animal consumption and environmental samples. Positive results can be confirmed with a Pastorex Staph Plus latex test or on a pre-poured Baird Parker + RPF agar plate.

PRINCIPLE

The RAPID' Staph medium is based on a Baird Parker formula optimized for the detection and enumeration of *Staphylococcus aureus* in 24 hr.

The principle of the medium relies on the capacity of *Staphylococcus aureus* to reduce tellurite (black colonies) and induce the proteolysis of egg yolk (clear halo around colonies).

VALIDATIONS

RAPID' Staph is validated by the AOAC Research Institute under the "Performance Methods Tested" status and NordVal International as per EN ISO 16140-2 protocol.

Target	Certificate references	Scope	Reference method	Validation Protocol
Coagulase-positive Staphylococci (<i>Staphylococcus aureus</i> and other species)	NordVal No: 049	Broad range of food	ISO 6888-1	EN ISO 16140-2
	080602	Pasteurized whole milk, custard pie, processed ham & smoked salmon	Official Methods of Analysis (2000) 17 th Ed., AOAC INTERNATIONAL, Gaithersburg, MD, Methods 975.55	AOAC [®] Performance Tested Methods SM

STORAGE / SHELF-LIFE / BATCH

- Pre-poured : + 2-8°C
- Dehydrated: + 15-25°C, in carefully sealed package, in a cool, dry and dark place
- Petri dishes (complete medium) prepared by user: 5 days maximum at + 2-8°C, in a dark place
- Expiration date and batch number are shown on the package

THEORETICAL FORMULA

Peptone	10 - 20 g	Sodium pyruvate	10 g
Yeast extract	1 g	Potassium tellurite	0.1 g
Meat extract	5 g	Egg yolk	10 ml
Lithium chloride	5 g	Sulfamethazine	0.05 g
Agar	14 g	Distilled water	1,000 ml
L-Glycine	12 g		

Final pH (25°C) = 7.2 ± 0.2

PREPARATION COMPLETE MEDIUM**• Preparation of Base medium****Always shake before use**

- Dissolve 57 g of powder in 1 liter of distilled water.
- Wait for 5 min, and then mix until a homogenous suspension is obtained.
- Heat gently, swirling frequently, then bring to the boil until completely dissolved.
- Dispense 90 ml of medium per bottle.
- Sterilize in autoclave at $121 \pm 1^\circ\text{C}$ for 15 min.

Reconstitution: 57 g/l. 500 g of powder makes 8.7 liters of medium.

• Preparation of Complete medium

For 90 ml of base medium, cool at $44\text{--}47^\circ\text{C}$:

- Add 5 ml egg yolk with potassium tellurite
- Mix thoroughly
- Pour into Petri dishes (thickness ~ 4 mm) and leave to solidify on a level surface.

Note:

- Do not over heat the complete media (47°C maximum)
- Prepared dishes can be keep up to 5 days maximum at $+2\text{--}8^\circ\text{C}$, in a dark place

PRODUCTS AND MATERIALS REQUIRED (Not supplied and non-exhaustive list)

Medium preparation:

Egg yolk + potassium tellurite:

3554201 5 ml x 1 vial
3554205 25 ml x 1 flask

Confirmation:

Pastorex Staph Plus:

3556356 50 tests
3556353 250 tests

Baird Parker + RPF:

3564814 Dehydrated 500g
3564618 RPF Supplement x 10 vials
3563996 Pre-poured 90 mm x 20
3578618 90 ml x 6 Baird Parker
agar base + 6 RPF sup.

Equipment and material:

- Scales
- Sterile weighing bags
- Mill
- Stirrer-homogenizer
- 125 ml bottles (autoclave-proof)
- Sterile Petri dishes (\varnothing 90 mm)
- Sterile pipettes
- Sterile spreaders
- Sterile Pasteur pipette
- Water-bath
- Incubators or incubation room
- All usual laboratory equipment

PROTOCOL**• Preparation of sample**

According to the standards applicable to the product concerned.

• Inoculation

- Spread 0.1 ml of the sample to be analysed or 0.1 ml of stock suspension and/or 0.1 ml of its decimal dilutions over the surface of the "dried" agar.

Note:

- If for some products it is necessary to proceed with the estimation of small numbers, spread 1 ml of stock suspension over 3 dishes of $\varnothing = 90$ mm (~ 0.33 ml/dish) or over 1 dish of $\varnothing = 140$ mm.

• Incubation

- Turn the dishes over and incubate at $37 \pm 1^\circ\text{C}$ for 24 ± 2 hr.

• Interpretation

- Presumptive coagulase-positive staphylococci form black colonies on this opaque medium with a clear halo around the colony, corresponding to a zone of proteolysis (lightening of egg yolk).

Note:

- If In some rare cases, some *Staphylococcus aureus* do not give characteristic colonies.
- **Confirmation**
- From the plates, collect 3 typical colonies and confirm:
 - Using Latex Pastorex Staph Plus (3556356 or 3556353)
 - Subculture by spot the collected colonies on pre-poured Baird Parker + RPF agar. Up to 12 colonies on one plate of pre-poured Baird Parker + RPF agar (3564814, 3578613 or 3563996) can be spotted
- **Expression of results/calculations**
- Refer to standard ISO 7218:2007 and ISO 7218/A1:2013 or specific standards

PRECAUTIONS

- The time lapse between the end of preparation of the stock solution (or 10⁻¹ dilution in the case of a solid product) and the moment when the dilutions come into contact with the culture medium must not exceed 45 minutes.
- Comply with Good Laboratory Practice. (ISO 7218:2007 and ISO 7218/A1:2013).
- Some *Staphylococcus coagulase positive* can give colonies with a small or without halo after 24 hours of incubation. An additional incubation of 24 hours could be necessary to see the halo. If there is any doubt, a confirmation testing perform on the suspect colony is recommended.
- See SDS for Product Safety Information, www.bio-rad.com
- Do not add the egg yolk to the potassium tellurite, sodium pyruvate and L-Glycine in a base medium at a temperature shall not exceed 47°C.

TECHNICAL SUPPORT IN THE UNITED STATES

In the United States, for technical assistance please call (800) 4BIORAD. Select option 2 for technical support and option 2 again for the food science division. To place an order, please call (800) 4BIORAD and press option 1 for customer care.

QUALITY CONTROL

Every product manufactured and marketed by Bio-Rad is subject to a quality-assurance procedure at all stages, from the reception of raw materials to the marketing of the end-product. Each batch of finished product undergoes quality control and is marketed only if it satisfies the acceptability criteria. Documentation relative to the production and control of each batch is kept on file.

QUALITY AND PERFORMANCE OF THE TEST

See quality certificate available on www.bio-rad.com/certificate (Catalog#/ref# and Lot# number are required)

KEY WORDS

RAPID[®] Staph / *Staphylococcus aureus* / Food product / Enumeration / Coagulase / Medium.

For more information about Bio-Rad Food Testing products, visit our website: www.foodscience.bio-rad.com