Also known as
BP Agar; Egg Yolk Tellurite Glycine Piruvate Agar; ETGP Agar

Specification
Selective culture medium for the screening of staphylococci from a variety of samples, according to Pharmacopeial Harmonized Methods, ISO and DIN standards.

Formula * in g/L
Tryptone..... 10.0
Sodium pyruvate..... 10.0
Glycine..... 12.0
Meat extract..... 5.0
Lithium chloride..... 5.0
Yeast extract..... 1.0
Agar.....17.0

Final pH 7.2 ±0.2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions
Suspend 60 g in 950 mL of distilled water. Allow to soak and bring to the boil stirring constantly. Sterilize in the autoclave at 121°C for 15 minutes. Cool to 50ºC and add 50 mL of Egg Yolk Tellurite Sterile Emulsion (Art. No. 351430XF). Homogenize and distribute into plates. Once prepared, the medium must not be reheated nor sterilized again.

Description
Baird Parker Agar Base is recommended for the detection and enumeration of staphylococci in food and other material, since it allows a good differentiation of coagulase-positive strains. The growth of the accompanying bacteria is usually suppressed by the high concentration in lithium, glycine and pyruvate. Lithium and glycine enhances the growth of staphylococci. Occasionally the medium may grow some *Bacillus species*, yeast and very rarely, *Proteus*. The growth of *Proteus species* can be suppressed by adding 50 mg/L of sulphamethazine.
The presence of tellurite and egg yolk, which must be added to the medium after sterilisation, allows the differentiation of presumptive pathogenic staphylococcal colonies. There is a high correlation between the coagulase test and the presence of clear zones of lypolysis in this medium, which is due to the staphylococcal lecithinase. Studies show that almost 100% of coagulase-positive staphylococci are capable of reducing tellurite, which produces black colonies, whereas other staphylococci can not always do so.
If you want to make the Coagulase test, add 1 vial of RPF Lyophilized Supplement (DSHB3019) at 90 ml of the Baird Parker Agar Base, and proceed according to the instructions for use of the supplement.

Technique
The inoculation is carried out by spreading 0.1 ml of sample over each plate with a Drigalsky loop. After 24-48 hours of incubation at 37±1ºC, select the colonies which are black, shiny and convex with regular margins surrounded by a clear zone. These can be presumbly identified as coagulase-positive *Staphylococcus aureus*.

Colonial appearance after 24-48 hours at 37±1 °C:
- *Staphylococcus aureus*: Black, shiny, convex, regular margins, 1.0-1.5 mm diameter, surrounded by a clear zone of lipolysis 2-5 mm in width. Wide opaque zones of precipitate extending into the cleared medium may occur after 48 hours.
- Other species of *Staphylococcus*: Black, usually dull, with regular margins. Sometimes brown with zones of clearing but these present as wide opaque zones.
- *Micrococcus spp*: Brown, very small and without clearing zones.
- *Bacillus spp*: Various shades of brown, big. May produce clearing zones after 48 hours.
- Yeasts: White, big and smooth.

Quality control
Incubation temperature: 37 °C ± 1 **Incubation time:** 24-48 ± 2 h

Inoculum: Practical range 100 ± 20 CFU. min. 50 CFU (productivity)/ 10^4-10^6 CFU (selectivity)/ 10^3-10^4 CFU (specificity), according to ISO 11133:2014/Amd 1:2018.

Microorganism	Growth	Remarks
Escherichia coli ATCC® 8739	Inhibited	Selectivity
Staphylococcus aureus ATCC® 25923	Productivity > 0.50	Black colonies; Lecithinase (+)
Staphylococcus aureus ATCC® 6538	Productivity > 0.50	Black colonies; Lecithinase (+)
Staphylococcus epidermidis ATCC® 12228	Poor to good (Specificity)	Black colonies; Lecithinase (-)
Staphylococcus saprophyticus ATCC® 15305	Poor to good (Specificity)	Black colonies; Lecithinase (-)

References

· ATLAS R.M. & L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press. London.
· BAIRD-PARKER, A.C. (1962) An improved diagnostic and selective medium for isolating coagulase-positive staphylococci. J. Appl. Bact. 25:12.
· COLIPA (1997) Guidelines on Microbial Quality Management (MQM). Brussels.
· DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA. Washington. USA.
· EUROPEAN PHARMACOPOEIA (2007) 5thed. Suppl. 5.6 § 2.6.13 Microbiological examination of non-sterile products. EDQM. Council of Europe. Strasbourg.
· FIL-IDF 60:2001 Standard. Lait et produits à base de lait - Detection des staphylocoques à coagulase positive - Technique du nombre le plus probable. Brussels.
· ISO 5944:2001 Standard. Milk and Milk based products - Detection of coagulase positive staphylococci - MPN Technique. Geneva.
· ISO 6888-1:1999/Adm.2:2018. Standard. Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (*Staphylococcus aureus* and other species)- Part 1 Technique using Baird-Parker Agar medium. Adment 2: Inclusion of an alternative confirmation test using RPFA stab method.
· ISO 6888-2:1999 Standard. Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci - Part 1 Technique using rabbit plasma fibrinogen agar medium. Geneva.
. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
· ISO 22718 Standard (2015) . Cosmetics - Microbiology - Detection of Staphylococcus aureus.
· USP 31 - NF 26 (2008) <61> Microbial Limit Tests. US Phamacopoeial Conv. Inc. Rockville. MD. USA.
· ZANGERL, P. & H. ASPERGER (2003) Media used in the detection and enumeration of *Staphylococcus aureus*. In Handbook.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).