

E.C.O.A.GAR
(ENTEROCOCCUS CHROMOGENIC OTTAVIANI & AGOSTI AGAR)
Sodium azide free chromogenic medium acc. to Ottaviani and Agosti
for the detection of enterococci

Typical Formulas**E.C.O.A.GAR** (g/l)

Peptones	28.0
Sodium chloride	5.0
Glucose	1.0
Emulsifying agents	5.7
Phosphate buffer	5.0
Agar	15.0
Chromogenic Substrates	180.0 mg
Selective compounds	26.0 mg

KANAMYCIN SELECTIVE SUPPLEMENT (vial contents for 500ml of medium)

Kanamycin Sulphate	10 mg
--------------------	-------

E.C.O.A.GAR (ready to use plates)

Peptones	28.0
Sodium chloride	5.0
Glucose	1.0
Emulsifying agents	5.7
Phosphate buffer	5.0
Agar	15.0
Chromogenic Substrates	180.0 mg
Selective compounds	26.0 mg
Kanamycin Sulphate	20 mg
Distilled water	1000 ml

Directions

Suspend 30 g in 500ml of cold distilled water. Heat to boiling to dissolve completely. Sterilise by autoclaving at 121°C for 15 minutes. Cool to 50°C and add the contents of one vial of Kanamycin Selective Supplement reconstituted with 5ml of sterile distilled water. Mix well to suspend the flocculent blue precipitate and distribute into sterile Petri dishes.

Final pH 7.2 ± 0.2

Description and technique

E.C.O.A.GAR is a selective and differential medium, prepared according to the formulation developed by Ottaviani and Agosti, for the isolation, enumeration and immediate identification of enterococci from foodstuffs, environmental samples and clinical specimens.

The selectivity of the medium is obtained by the presence of a mixture of antimicrobial compounds including kanamycin. E.C.O.A.GAR doesn't contain sodium azide and this avoids the problems of the disposal of the plates.

The differentiation of the colonies is obtained by the presence of a chromogenic mixture to detect specific enzymatic activities of enterococci and of contaminating bacteria.

The medium can be used according to usual laboratory techniques with surface inoculation technique, pouring plated technique or MF procedure for liquid samples.

Enterococci grow with blue or green-blue colonies after incubation at 37°C for 24 hours.

The rare non-enterococci strains resistant to the selective agents grow with violet colonies.

E.C.O.A.GAR shows a better productivity and specificity if compared with KAA and KF media. Particularly *Enterococcus avium* FAIR-E101, *Enterococcus faecium* FAIR-E 102, E130, E 131, E-338, *Enterococcus hirae* FAIR-E 174, *Enterococcus malodoratus* FAIR-E168, E169, from BCCM/LMG Bacteria Collection, University of Gent give typical colonies on E.C.O.A.GAR and atypical colonies on traditional media

User quality assurance (37°C-24 hrs)

Productivity control

E. faecalis ATCC 19433: good growth, green-blue colonies

Selectivity control

E. coli ATCC 25922: inhibited**Storage**

Dehydrated medium: 2-8°C

Selective Supplement: 2-8°C

Ready to use plates: 2-8°C

User prepared plates and flasks: up to 7 days at 2-8°C

Reference

Ottaviani, F, Agosti, M. (2000) Personal communication

Packaging

4014301	E.C.O.A.GAR	100 g (1.7 l)
4014302	E.C.O.A.GAR	500 g (8.3 l)
4240055	Kanamycin Selective Supplement,	10 vials, each for 500 ml of medium
541430	E.C.O.A.GAR	20 ready to use plates, 90 mm
491430	E.C.O.A.GAR	30 ready to use plates, 55 mm