Tryptic soy agar (Ph.Eur., USP, JP) Code 84602.0500

Also know as
Casein soya bean digest agar, TSA.

Intended use
General growth medium for isolation, enumeration and cultivation of microorganisms.

Formula * - Composition in g/L
Pancreatic digest of casein…… 15.0
Papaic digest of soya bean…… 5.0
Sodium chloride…… 5.0
Agar……15.0

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

Final pH 7.3 ± 0.2 at 25 °C.

Instructions for preparation
Dissolve 40 g in 1 litre of purified water by bringing to the boil with frequent shaking. Sterilise in the autoclave at 121 °C for 15 minutes.

Principle of the method and general information
Tryptic soy agar is a multipurpose medium, which support the growth of a wide variety of microorganisms. The formulation meets the requirements of casein soya bean digest agar described by Ph.Eur., USP, JP.
Tryptic soy agar is recommended for the microbial enumeration test of non-sterile products described by Ph.Eur. Because of the nutritional characteristics, absence of inhibitors, and the possibility of supplementation with several compounds, this medium is recommended for the isolation of many microorganisms, for maintaining stock cultures and for the preparation of vaccines. Tryptic soy agar may be supplemented with defibrinated animal blood (at concentrations between 5% and 15%) to provide a more nutritious medium for fastidious organisms and for the detection of their haemolytic pattern, or with antimicrobials to provide a selective medium for the isolation of specific microorganisms out of a mixed flora.
Pancreatic digest of casein and papaic digest of soya bean provide nitrogen, carbon, essential amino acids, vitamins and minerals to support microbial growth while sodium chloride is used to maintain the osmotic equilibrium.

Instructions for use
For laboratory use only.
The experimental procedure depends on the purpose for which the medium is used. Refer to the various compendia or Standards or European Pharmacopoeia for the for the details of the procedures.

Limitations
- It is recommended that biochemical and/or serological tests be performed on colonies from pure culture for complete identification.

Quality Control
Physical characteristics:

Appearance of powder	Pale yellow, fine, homogeneous hygroscopic powder
Appearance of prepared medium	Pale yellow, limpid
pH (25°C)	7.3 ± 0.2

VWR International bvba/sprl
Haasrode Research park Zone 3
Geldenaaksebaan 464
b-3001 Leuven Tel +32 (0) 16 385 011

Revision: TS-846020500.docx rev 0-05-2013

Microbiological characteristics:

Test Strains	Incubation T° / t / At.	Inoculation method	Growth characteristics	Productivity Ratio
TSA with defibrinated sheep blood				
E. coli ATCC 25922	35-37 °C / 24 h / AE	EC	Good growth	
S. aureus ATCC 25923	35-37 °C / 24 h / AE	EC	Good growth	
S.pyogenes ATCC 19615	35-37 °C / 24 h / AE	EC	Good growth, beta haemolysis	
S. pneumoniae ATCC 6305	35-37 °C / 24 h / AE	EC	Good growth, alpha haemolysis	
S. gruoup B ATCC 12386	35-37 °C / 24 h / AE	EC	Good growth, beta haemolysis	
CAMP TEST				
S. aureus ATCC 25923	35-37 °C / 24 h / AE			
S. agalactiae ATCC 13813			Positive	
S.pyogenes ATCC 19615			Negative	
TSA without defibrinated sheep blood, according to Ph. Eur.				
P.aeruginosa ATCC 9027	30-35° C / 24-72 h / AE	QT / ≤ 100 CFU	Good growth	PR ≥ 0.7
S. aureus ATCC 6538	30-35° C / 24-72 h / AE	QT / ≤ 100 CFU	Good growth	PR ≥ 0.7
B .subtilis ATCC 6633	30-35° C / 24-72 h / AE	QT / ≤ 100 CFU	Good growth	PR ≥ 0.7
C. albicans ATCC 10231	30-35° C / 24-72 h / AE	QT / ≤ 100 CFU	Good growth	PR ≥ 0.7
A.brasiliensis ATCC 16604	30-35° C / 72 h / AE	QT / ≤ 100 CFU	Good growth	PR ≥ 0.7

Notes
PR (Productivity Ratio): CFU obtained on the culture medium under test / CFU obtained on TSA Reference Batch
Incubation atmosphere AE:aerobic incubation
Inoculation method QT : quantitative surface plating method; EC: semi-quantitative, ecometric technique
Microbiological characteristics tested in accordance to Ph.Eur.
ATCC is a registered trade mark of American Type Culture Collection

References

- Bailey, W.R. & Scott, E.G. (1974) - Diagnostic Microbiology, 4th edition. St. Louis: C.V. Mosby Company.
- European Pharmacopoeia 6.8, 2.6.12 Microbial enumeration tests
- NCCLS document M22-A2, 1996. Quality Assurance for Commercially prepared Microbiological Culture Media-2nd ed.; Approved Standard.

Storage conditions

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+10 ºC to 30 ºC and <60% RH).

Ordering information

84602.0500	Tryptic soy agar (Ph.Eur., USP, JP)	Bottle of 500 g

VWR International bvba/sprl
Haasrode Research park Zone 3
Geldenaaksebaan 464
b-3001 Leuven Tel +32 (0) 16 385 011

Revision: TS-846020500.docx rev 0-05-2013