

# TECHNICAL DATA SHEET

Article No. 9691

**Tryptic Soy Agar (TSA) TL, contact plates, blister, double wrapping**

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## SYNONYMS

CASO agar with TL, CASO agar with neutralisers, CASO agar with disinhibitors

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## SPECIFICATION

Contact plates in blister, double wrapping, irradiated. Solid general purpose medium for total bacterial count in routine hygienic monitoring in the presence of disinfectants, with TL as disinhibitors/neutralisers. Containing animal and plant peptone.

Color: straw-colored yellow  
pH: 7.3 ±0.2 at 25 °C

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## COMPOSITION IN G/L

Casein peptone	15.00
Soy peptone	5.00
Sodium chloride	5.00
Polysorbate 80	5.00
Lecithin	0.70
Agar	15.00

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## PACKAGING DETAILS

### 9691-30PLATES

30 contact plates 55 mm, double wrapping, irradiated

Content: 15 ±2 ml

Packaging unit: 1 box with 5 blisters (PET laminated and PPBO bag), 6 contact plates/blister. Every pack exhibits an irradiation indicator (8-14kGy).



## GUIDELINES

### Description:

TSA is a widely used medium containing two peptones which support the growth of a wide variety of organisms, even that of very fastidious ones such as *Neisseria*, *Listeria*, *Brucella*, etc. It is frequently used for routine diagnostic purposes due to its reliability and its easily reproducible results.

It is a classical medium for microbiological examination of non-sterile products according to Pharmacopeial Harmonised Methods.

The addition of the neutralising agents (TL - Tween® 80, Lecithine) may inactivate a variety of disinfectants.

\* Polysorbate 80/ Tween® 80 neutralises hexachlorophene and mercurial derivatives.

\* Lecithine neutralises chlorhexidine.

\* The combination of Lecithine and Polysorbate 80 neutralises the quaternary ammonium compounds.

### Technique:

Contact plates are used in microbiological control of disinfection and cleaning of surfaces. It acts simultaneously as a sampler and incubation culture medium without the need for any other intermediate steps. The plates are presented in a form appropriate for this function and can be used with different culture media depending on the type of microbe that needs to be controlled. On average, the plates provide a contact surface of approximately 25 cm<sup>2</sup>.

To use, remove the cover and gently press the culture medium on the surface to be controlled, ensuring contact between the two surfaces. The contact plate is then removed and covered with the lid to prevent air contamination. It is advised to secure the lid with adhesive tape and the bottom labelled with the sampling data (place, date and time).

If the sample surfaces are rough, the contact plates will not make good contact even when the pressure is increased. In these cases it is advisable to delineate a sample surface area of 25 cm<sup>2</sup> and rub this area vigorously with a wet sterile swab, then rub the swab over the contact plate.

To verify the effectiveness of a cleaning or disinfection process, contact plates should be used within two hours after finishing the process, ensuring that the sample surface is dry. It is advised to always include positive controls, sampling the area before disinfection or sampling dirty areas next to the disinfected area.

The technician will determine the frequency of sampling and disinfection according to performance criteria. Apply the agar directly onto surface to be monitored, ensuring that the pressure is distributed over the whole plate for 10 seconds. Clean the surface where the sample was collected in order to remove any traces of agar.

The inoculated plates are incubated at 30-35 °C for 24-72 hours (bacteria) and 3-5 days for fungi (yeast and molds) and examined daily.

Note: Contact plates are used for monitoring the microbiological contamination of surface and air inside cleanrooms, isolators, RABS, food industries and hospitals. The double/triple irradiated wrapping ensures that the package itself doesn't contaminate the environment as the first wrapper is removed just before entering the clean area.

## MICROBIOLOGICAL CONTROL

Inoculate: Practical range 100 ±20 CFU. Min. 50 CFU (Productivity).

Analytical methodology acc. to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 30-35 °C. Read after 18-24 h to 72 h for bacteria and 3-5 days for fungi.

Microorganism	Growth
<i>Escherichia coli</i> ATCC® 8739, WDCM 00012	Good (≥ 70 %)
<i>Staphylococcus aureus</i> ATCC® 6538, WDCM 00032	Good (≥ 70 %)
<i>Bacillus subtilis</i> ATCC® 6633, WDCM 00003	Good (≥ 70 %)
<i>Candida albicans</i> ATCC® 10231, WDCM 00054	Good (≥ 70 %)
<i>P. aeruginosa</i> ATCC® 9027, WDCM 00026	Good (≥ 70 %)
<i>Aspergillus brasiliensis</i> ATCC® 16404, WDCM 00053	Good (≥ 70 %)

### Sterility control:

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

## BIBLIOGRAPHY

- ATLAS, R.M. & L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
- COLIPA (1997) Guidelines on Microbial Quality Management (MQM). Brussels.
- DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Food, 4th ed, ASM, Washington D.C.
- EUROPEAN PHARMACOPOEIA 10.0 (2020) 10th ed. § 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. EDQM. Council of Europe. Strasbourg.
- FDA (Food and Drug Administration) (1998) Bacteriological Analytical Manual. 8th ed. Revision A. AOAC International. Gaithersburg. MD.
- HORWITZ, W. (2000) Official Methods of Analysis of AOAC INTERNATIONAL, 17th ed. Gaithersburg, MD. USA.
- ISO 9308-1 Standard (2000) Water Quality. Detection and enumeration of *E. coli* and coliform bacteria. Membrane filtration method.
- ISO 11731 Standard (2017) Water Quality. - Enumeration of *Legionella*.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- ISO 18415 Standard (2017) Cosmetics - Microbiology - Detection of specified and non-specified microorganisms.
- ISO 21149 Standard (2017) Cosmetics - Microbiology - Enumeration and detection of aerobic mesophilic bacteria.
- ISO 21150 Standard (2015) Cosmetics - Microbiology - Detection of *Escherichia coli*.
- ISO 22717 Standard (2015) Cosmetics - Microbiology - Detection of *Pseudomonas aeruginosa*.
- ISO 22718 Standard (2015) Cosmetics - Microbiology - Detection of *Staphylococcus aureus*.

- ISO 22964 (2017) Microbiology of the food chain.- Horizontal method for the detection of *Cronobacter* spp
- PASCUAL ANDERSON, M<sup>a</sup>R<sup>a</sup> (1992) Microbiología Alimentaria. Díaz de Santos S.A., Madrid.
- USP 33 - NF 28 (2011) <62> Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. USP Corp. Inc. Rockville. MD. USA.

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## STORAGE

2-25 °C

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## SHELF LIFE

7 months unopened from date of manufacture

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updated: 22.09.2023

