Technical Data Sheet

GSP Agar (Pseudomonas Aeromonas Selective Agar) acc. to KIELWEIN (base)

Ordering number: 1.10230.0500

Medium proposed by KIELWEIN (1969, 1971) for the detection of Pseudomonas and Aeromonas in foodstuffs as well as in wastewater and equipment of the food industry.

Mode of Action

This glutamate starch phenol-red agar contains glutamate and starch as its sole nutrients. Many accompanying microorganisms cannot metabolize these compounds (STANIER et al. 1966). Starch is degraded by Aeromonas with acid production causing phenol red to change the yellow, but not by Pseudomonas. The selective inhibitors penicillin and, if desired, the antimycotic pimaricin are added to the medium to improve its selectivity.

Typical Composition (g/L)

GSP Agar (Pseudomonas Aeromonas Selective Agar) acc. to KIELWEIN (base)	
Sodium L(+)glutamate	10.0
Starch, soluble	20.0
Potassium dihydrogen phosphate	2.0
Magnesium sulfate	0.5
Phenol red	0.36
Agar-agar**	12.0

**Agar-agar is equivalent to other different terms of agar.

Also to be added: penicillin G 100,000 IU; if required pimaricin 0.01.

Preparation

Suspend 45 g/litre, autoclave (15 min at 121 °C), cool to 45-50 °C. Add 100,000 IU sodium penicillin g/litre and, if required, 0.01 g pimaricin/litre, mix and pour plates.

pH: 7.2 ± 0.2 at 25 °C.

The plates are clear and red.

Experimental Procedure and Evaluation

Inoculate by spreading the sample material on the surface of the plates.

Incubation: up to 3 days at approx. 28 °C aerobically.

Appearance of Colonies	Microorganisms
Large, diameter of 2-3 mm, blue-violet, surrounded by a red-violet zone	Pseudomonas
Large, diameter of 2-3 mm, yellow, surrounded by a yellow zone	Aeromonas
Usually small, delayed growth, sometimes mucoid	Enterobacteriaceae and others

Storage

Store at +15 °C to +25 °C, dry and tightly closed. Do not use clumped or discolored medium. Protect from UV light (including sun light). For *in vitro* use only.

Quality Control

Control strains	Growth, 48 h , 28°C, aerobic	Colour change to:
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)	Good to very good	red
Pseudomonas aeruginosa ATCC 9027 (WDCM 00026)	Good to very good	red
Pseudomonas aeruginosa ATCC 10145 (WDCM 00024)	Good to very good	red
Aeromonas hydrophila ATCC 7966 (WDCM 00063)	Good to very good	yellow
Aeromonas veronii ATCC 9071	Good to very good	yellow
Escherichia coli ATCC 25922 (WDCM 00013)	None to poor	
Staphylococcus aureus ATCC 25923 (WDCM 00034)	none	

Please refer to the actual batch related Certificate of Analysis.

Literature

KIELWEIN, G., GERLACH, R., u. JOHNE, H.: Untersuchungen über das Vorkommen von Aeromonas hydrophila in Rohmilch. - **Arch. f. Lebensmittelhyg., 20**; 34-38 (1969).

KIELWEIN, G.: Ein Nährboden zur selektiven Züchtung von Pseudomonaden und Aeromonaden. - **Arch. f. Lebensmittelhyg., 20**; 131-133 (1969).

KIELWEIN, G.:Pseudomonaden und Aromonaden in Trinkmilch: Ihr Nachweis und ihre Bewertung. - **Arch. f. Lebensmittelhyg., 22**; 15-19 (1971).

KIELWEIN, G.: die Isolierung und Differenzierung von Pseudomonaden aus Lebensmitteln. - **Arch. f. Lebensmittelhyg., 22**; 29-37 (1971).

STANIER, R.Y., PALLERONI, N.J., a. DOUDOROFF, M.: The aerobic Pseudomonas - a taxonomic study. - **J. Gen. Microbiol., 42**; 159-271 (1966).

Ordering Information

Product	Cat. No.	Pack size
GSP Agar (Pseudomonas Aeromonas Selective Agar Base) acc. to KIELWEIN	1.10230.0500	500 g
Pimaricin	1.07360.0001	1 g
Penicillin G potassium salt	Calbiochem 5161-25MU	25 MU

Merck KGaA, 64271 Darmstadt, Germany
Fax: +49 (0) 61 51 / 72-60 80
mibio@merckgroup.com
www.merckmillipore.com/biomonitoring

Find contact information for your country at:
www.merckmillipore.com/offices
For Technical Service, please visit:
www.merckmillipore.com/techservice