PROREADY
Ready To Use Culture Media

UPUTSTVO ZA UPOTREBU (SRB)

Brilliant Green Agar Plate

Podloga za selektivnu izolaciju Salmonellae vrsta osim Salmonella Typhi iz uzorka fecesa, namirnica i mlečnih proizvoda

Sadržaj pakovanja:

Šifra artikla (pakovanja)	Opis	Šifra primarnog pakovanja:	Broj podloga
PRM016V20	Podloga izlivena u petri posudama od ø90	PRM016	20
PRM016V60			60
PRM016V240			240
PRM016M40	Podloga izlivena u petri posudama od ø50		40

Uputstva

Pod aseptičnim uslovima inokulisati ploču metodom površinskog zasejavanja. Nakon inkubacije posmatrati rast i boju kolonija.

Princip i interpretacija

Neke vrste Salmonella prouzrokuju mnoge infekcije, od blagog gastroenteritisa do tifusne groznice opasne po život. Najčešći oblik bolesti salmonele, samoograničavajući gastroenteritis ima simptome temperature koja traje manje od 2 dana i dijareje koja traje manje od 7 dana. Brilliant Green Agar baza modifikovana, kao primarni medijum za izolaciju Salmonele prvi su opisali Kristensen et. al. (1) koja je dalje modifikovana od strane Kaufmana (2). Brilliant Green Agar bazu takođe preporučuju APHA (3,4) FDA (5) i opisan je u EP, BP i IP (6,7,8). Ova podloga brilijantno zelene boje inhibira rast većine gram-negativnih i gram-pozitivnih bakterija. Uglavnom inhibira Salmonella Typhi, Shigella vrste, Escherichia coli, Pseudomonas vrste i Staphilococcus aureus. Na ovu podlogu mogu direktno biti zasejani klinički uzorci. Međutim, pošto je veoma selektivan, preporučuje se da se ovaj medijum koristi zajedno sa manje inhibišućim medijumom kako bi se povećale šanse za oporavak. Često se kulture obogaćene selenitom ili tetrationatnim bujonom zasejavaju na ovu podlogu zajedno sa bizmut sulfitnim agarom, SS agarom, MacConkei agarom. Medijum sadrži proteozni pepton i ekstrakt kvasca kao izvore ugljenika, azota, vitamina, aminokiselina i esencijalnih hranljivih materija. Dva šećera, odnosno laktoza i saharoza, služe kao izvori energije. Fermentacija laktoze i/ili saharoze u medijumu dovodi do formiranja kiselog pH koji se detektuje fenol crvenim indikatorom. Natrijum hlorid održava osmotsku ravnotežu. Briljantna zelena pomaže u suzbijanju kontaminirajuće mikroflore. Medijum se može dodatno dopuniti sulfacetamidom (1g/l) i natrijum mandelatom (0,25g/l) da bi se inhibirali kontaminirajući mikroorganizmi kada se sumnja da uzorak sadrži veliki broj konkurentskih organizama zajedno sa vrstama Salmonella. Bakterije koje ne fermentiraju laktozom razvijaju bele do ružičasto crvene kolonije u toku od 18-24 sata od inkubacije.

Kontrola kvaliteta

Podaci i rezultati kontrole kvaliteta dati su u sertifikatu analize za svaku seriju.

Skladištenje i rok upotrebe

Čuvati između 15-25°C. Nakon prvog otvaranja čuvati na 2-8°C. Upotrebiti pre isteka datuma označenog na nalepnici.

Mere predostrožnosti

Ovaj proizvod ne sadrži hazardne supstance u koncentracijama koje su iznad propisanih limita određenih važećim zakonskim regulativama i zato nije klasifikovan kao opasan. Ipak, preporučeno je slediti smernice iz bezbednosnog lista za pravilnu upotrebu. Ovaj proizvod je namenjen isključivo za upotrebu u laboratorijskim uslovima, od strane profesionalno obučene osobe.
Proizvod ne upotrebljavati ukoliko je primarno pakovanje oštećeno ili proizvod ne odgovara navedenim karakteristikama.

Odlaganje otpada

Odlaganje otpada mora biti u skladu sa nacionalnim i lokalnim regulativama koje su na snazi. Svaka laboratorija je odgovorna za rukovanje i odlaganje otpada koji nastaje u toku rada.

Upotrebljeni simboli

	Držati uspravno	REF	Kataloški broj
	Ne izlagati direktno sunčevim zracima	LOT	Lot broj
	Konsultovati uputstvo za upotrebu		Rok upotebe
	Ne koristiti više puta		Temperatura čuvanja
	Veličina pakovanja		Proizvođač

Literatura

1. Kauffman F., 1935, Seit F. Hyg. 177:26.
2. Kristensen M., Lester V, and Jurgens A., 1925, Brit.J.Exp.Pathol.,6:291.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Standard Methods for the Microbiological Examination of Dairy Products, 1995, 19th Ed, APHA, Washington, D.C.
5. Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.
6. Indian Pharmacopoeia, 2018, Indian Pharmacopoeia Commission, Ministry of Health and Family Welfare Government of India.
7. The British Pharmacopoeia, 2022, Medicines and Healthcare products Regulatory Agency.
8. European Pharmacopoeia, 2022, 10 th volume, European Directorate for the quality of medicines & Healthcare.
9. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
10.Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
11.American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
12.Bacteriological Analytical Manual, 5th Ed, 1978, AOAC, Washington D.C.
13.Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.

PROREADY
Ready To Use Culture Media

INSTRUCTION FOR USE (EN)

Brilliant Green Agar Plate

Recommended for selective isolation of Salmonellae other than Salmonella Typhi from faeces, food, dairy products

Package contents:

Item code (packaging) REF	Description	Primary packaging code:	Number of products
PRM016V20	Substrate poured into petri dishes of ø90	PRM016	**20**
PRM016V60			**60**
PRM016V240			**240**
PRM016M40	Substrate poured into petri dishes of ø50		**40**

Directions

Aseptically inoculate the plate by the surface seeding method. After incubation observe the growth and color of the colonies.

Principle and interpretation

Salmonella species cause many types of infections, from mild self-limiting gastroenteritis to life threatening typhoid fever. The most common form of *Salmonella* disease is self-limiting gastroenteritis with fever lasting less than 2 days and diarrhoea lasting less than 7 days. Brilliant Green Agar Base, Modified, as a primary plating medium for isolation of *Salmonella* species was first described by Kristensen et. al. (1) and further modified by Kauffmann (2). Brilliant Green Agar is also recommended by APHA (3,4) FDA (5) and described in EP, BP and IP (6,7,8). This medium contains brilliant green, which inhibits growth of majority of Gram-negative and Gram-positive bacteria. *Salmonella* Typhi, *Shigella* species *Escherichia coli*, *Pseudomonas* species, *Staphylococcus aureus* are mostly inhibited. Clinical specimens can be directly plated on this medium. However, being highly selective, it is recommended that this medium should be used along with a less inhibitory medium to increase the chances of recovery. Often cultures enriched in Selenite or Tetrathionate Broth is plated on Brilliant Green Agar along with Bismuth Sulphite Agar, SS Agar, MacConkey Agar. The medium contains proteose peptone and yeast extract as sources of carbon, nitrogen, vitamins, amino acids and essential nutrients. The two sugars namely lactose and sucrose serve as energy sources. Fermentation of lactose and/or sucrose in the medium results in the formation of acidic pH which is detected by phenol red indicator. Sodium chloride maintains the osmotic equilibrium. Brilliant green helps to inhibit the contaminating microflora. The medium can further supplemented with sulphaacetamide (1g/l) and sodium mandelate (0.25g/l) to inhibit contaminating microorganisms when the sample is suspected to contain large number of competing organisms along with *Salmonella* species. Non-lactose fermenting bacteria develop white to pinkish red colonies within 18 - 24 hours of incubation.

Quality control

The data and results of quality control are given in the certificate of analysis for each lot.

Storage and shelf life

Storage between 15-25°C. After opening storage between 2-8°C.
Use before expiry date on the label.

Warning and precautions

This product does not contain hazardous substances in concentrations that are above the prescribed limits set by applicable legislation and are therefore is not classified as hazardous. However, it is recommended to follow the guidelines provided in the safety data sheet for proper use. This product is intended for laboratory use only by a professionally trained person.
Do not use the product if the primary packaging is damaged or the product does not meet the stated characteristics.

Disposal

Waste disposal must be in accordance with national and local regulations. Each laboratory is responsible for handling and disposing of waste generated during operation.

Symbols used on labels

	This side up		Catalogue number
	Do not expose directly to sunlight		Batch code
	Consult instructions for use		Use-by date
	Do not re-use		Temperature limit
	Pack size		Manufacturer

Reference

1. Kauffman F., 1935, Seit F. Hyg. 177:26.
2. Kristensen M., Lester V, and Jurgens A., 1925, Brit.J.Exp.Pathol.,6:291.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
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