Technical Data

HiCombi™ Dual Performance Selective Medium - SS

LQ036A

Intended use

Recommended as a qualitative test for rapid growth and confirmation of *Salmonella*. Combination of solid (20 ml) and liquid (40 ml) media in single bottle.

Composition**

Ingredients	g / L
Solid	20.000 ml
Peptone	5.000
HM peptone B #	5.000
Lactose	10.000
Bile salts mixture	8.500
Sodium citrate	10.000
Sodium thiosulphate	8.500
Ferric citrate	1.000
Brilliant green	0.00033
Neutral red	0.025
Agar	15.000
Liquid	40.000 ml

Same as solid media without Agar

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Label the ready to use LQ036A bottle. Remove the top seal of the cap. Disinfect the part of the rubber stopper which is now exposed. Transfer the sample immediately into the culture bottle by puncturing the rubber stopper with the needle. Venting: Use sterile venting needle (LA038). Keep the bottle in an upright position preferably in a biological safety cabinet, place an alcohol swab over the rubber stopper and insert the venting needle with filter through it. Insertion and withdrawal of the needle should be done in a straight line. Discard the needle and mix the contents by gently inverting the bottle 2-3 times. Do not vent the bottle for anaerobic cultures. Incubate at 35-37°C for 18-24 hours. Recommended volume of blood to be tested in LQ036A: 8-10 ml (For Adult use).

Principle And Interpretation

SS Agar medium is recommended as differential and selective medium for the isolation of *Salmonella* and *Shigella* species from pathological specimens (1) and suspected foodstuffs (2,3,4,5) and for microbial limit test (6). SS Agar is a moderately selective medium in which gram-positive bacteria are inhibited by bile salts, brilliant green and sodium citrate. Peptone, HM peptone B provides nitrogen and carbon source, long chain amino acids, vitamins and essential growth nutrients. Lactose is the fermentable carbohydrate. Brilliant green, bile salts and thiosulphate selectively inhibit gram-positive and coliform organisms. Sodium thiosulphate is reduced by certain species of enteric organisms to sulphite and H_2S gas and this reductive enzyme process is attributed by thiosulphate reductase. Production of H_2S gas is detected as an insoluble black precipitate of ferrous sulphide, formed upon reaction of H_2S with ferric ions or ferric citrate, indicated in the center of the colonies.

The high selectivity of Salmonella Shigella Agar allows the use of large inocula directly from faeces, rectal swabs or other materials suspected of containing pathogenic enteric bacilli. On fermentation of lactose by few lactose-fermenting normal intestinal flora, acid is produced which is indicated by change of colour from yellow to red by the pH indicator-neutral red. Thus, these organisms grow as red pigmented colonies. Lactose non-fermenting organisms grow as translucent colourless colonies with or without black centers. Growth of *Salmonella* species appears as colourless colonies with black centers resulting from H_2S production. *Shigella* species also grow as colourless colonies which do not produce H_2S.

Type of specimen

Clinical: faeces, rectal swabs; Suspected food stuffs.

Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (3,4).
For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Further biochemical test must be carried out for confirmation.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
In a sterile glass bottle combination of broth and one agar coated surface.

Colour of Agar medium
Reddish orange coloured medium

Colour of liquid medium
Reddish orange coloured medium

Quantity of medium
20ml of solid medium in glass bottle 40ml of liquid medium in glass bottle

pH of Agar medium
6.80-7.20

pH of liquid medium
6.80-7.20

Sterility Check
Passes release criteria

Cultural response
Cultural characteristics was observed after incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth on agar medium	Growth on liquid medium	Colour of colony
Escherichia coli ATCC 25922 (00054*)	50-100	Poor-good	Fair - good	-
# *Klebsiella aerogenes* ATCC 13048 (00175*)	50-100	Poor-good	Fair - good	-
Salmonella Typhimurium ATCC 14028 (00031*)	50-100	Luxuriant	Luxuriant	Colourless colonies with black center(H_2S production)
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	Luxuriant	Luxuriant	Colourless colonies with black center(H_2S production)
Shigella flexneri ATCC 12022	50-100	Luxuriant	Luxuriant	Colourless

Key : (*) Corresponding WDCM numbers, # Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

On receipt store between 2-8°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Reference

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3. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed.,APHA Inc., Washington, D.C.
5. Williams S., (Ed.), 2005, Official Methods of Analysis of the Association of Official Analytical Chemists, 19th Ed.,AOAC,Washington, D.C.
6. The United States Pharmacopoeia, 2006, USP29/NF24, The United States Pharmacopoeial Convention. Rockville, MD.
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IVD ***In vitro* diagnostic medical device**

Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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