Culture Media Concepts®

Dehydrated Culture Media
Technical Information

TRYPTIC SOY BROTH, MODIFIED WITH NOVOBIOCIN G470

SAMPLEREADY™ GAMMA IRRADIATED SOLUBLE MEDIA POUCH

USE: Tryptic Soy Broth, Modified with Novobiocin & Acid Digest of Casein is used for the selective enrichment of enterohemorrhagic *E. coli* in foods. Conforms to USDA Formulation[1].

DESCRIPTION: There are four recognized classes of enterovirulent *E. coli* that cause gastroenteritis in humans.[1] Enterohemorrhagic (EHEC) strain designated *E. coli* O157:H7, makes up one of the four classes.[1] *E. coli* serotype O157:H7 is a rare variety of *E. coli* that produces large quantities of one or more related, potent toxins that cause severe damage to the lining of the intestine.[1] *E. coli* O157:H7 infection often cause severe bloody diarrhea and abdominal cramps. The infection can also cause a complication called Hemolytic Uremic Syndrome (HUS). The toxins destroy red blood cells and can lead to kidney failure. About 2 – 7% of infections lead to HUS, particularly in children below the age of 5 and the elderly.[2] Tryptic Soy Broth, Modified with Novobiocin is used to enrich food samples suspected of having low levels of EHEC during pathogen testing.[3,4]

FORMULA* per Liter

Enzymatic Digest of Casein	17.0g
Sodium Chloride	5.0g
Dipotassium Phosphate	4.0g
Enzymatic Digest of Soybean Meal	3.0g
Dextrose	2.5g
Bile Salts No. 3	1.5g
Casamino Acids	10.0g
Novobiocin	8.0mg
Total	**43g**

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

Final pH: 7.3 ± 0.2 at 25°C

PREPARATION: Soluble Media Pouches are hermetically sealed in a Mylar Bag. Aseptically open the Mylar Bag and carefully remove a Media Pouch using sterile forceps or tweezers. The Media Pouches are single use. Once removed from the Mylar Bag the Pouches should be used immediately. Mix the Media Pouch in Purified or Sterile water with repeated stirring to dissolve completely. Use one liter of Purified or Sterile water per 43g of dry media in the Soluble Pouch. When completely dissolved, the mTSB+N should be free of contamination and ready for testing applications. Testing should include measuring for pH and testing performance with Quality Control Organisms.

QUALITY CONTROL SPECIFICATIONS:

1. The Mylar Bag is hermetically sealed.
2. The Dissolvable Pouch is dry and the inclusive powder is beige and free flowing.
3. Visually the prepared medium is light amber clear, to slightly hazy.
4. Expected cultural response after 18-24 hours at 35°C.

Microorganism	CFU	Growth
Escherichia coli ATCC™ 25922	30 – 300	+
Escherichia coli ATCC™ 11775	30 – 300	+
Escherichia coli O157:H7 ATCC™ 35150	30 – 300	+
Escherichia coli O157:H7 ATCC™ 43888	*30 – 300*	+
Pseudomonas aeruginosa ATCC™ 27853	30 – 300	Inhibition

STORAGE: Store the sealed Mylar Bag containing the Soluble Media Pouches in a cool dry environment at 2 to 30°C. Once the Mylar bag is opened, use all pouches within the bag as soon as possible. The unused pouches in the Mylar Bag can be stored for the duration of the shelf life, if the Bag is properly sealed and stored. The Dissolvable Pouches should be discarded if there has been a change from the original light beige color, or the inclusive powder is not free flowing.

LIMITATIONS AND PRECAUTIONS: Soluble film will dissolve in warm water (37°C to 42°C) within minutes with moderate agitation; however, culture media may take up to an hour to completely dissolve. Use prepared media within 3 hours for best results.

FOR LABORATORY USE ONLY

SIZES AVAILABLE: 9.7g (225ml), 43g (1 Liter)

REFERENCES:

1. **U.S. FDA.** Center for Food Safety & Applied Nutrition. 2001. Food pathogenic microorganisms and natural toxins handbook. *Escherichia coli* O157:H7. College Park, MD.
2. http://www.cdc.gov/ncidod/abmd/diseaseinfo/escherichiacoli_g.htm.
3. **Hill, W.E., A. R. Datta, P. Feng, K. A. Lampel, and W. L. Payne.** 1998. FDA Bacteriological analytical manual, 8th ed. Identification of Foodborne Bacterial Pathogens by Gene Probes. AOAC International, Gaithersburg, MD.
4. **U.S. Food and Drug Administration.** 1998. Bacteriological analytical manual, 8th ed., AOAC International, Gaithersburg, MD.

Millennium LifeSciences, Inc.
970 E. Orangethorpe Ave. Unit A
Anaheim, CA 92801
TEL: (714) 773-1726
FAX: (714) 773-1793