INTENDED USE
Remel Campylobacter Selective Agar is a solid medium recommended for use in qualitative procedures for primary and selective isolation of Campylobacter species from fecal specimens.

SUMMARY AND EXPLANATION
Campylobacter jejuni is a major cause of acute diarrheal disease in humans. It has worldwide distribution, is ubiquitous in domestic pets and food animals (e.g., poultry, cattle, sheep, pigs, etc.), and is frequently isolated from unpasteurized milk. Strains of Campylobacter other than C. jejuni have also been associated with human disease syndromes. In a study conducted in 1977, Skirrow used a selective medium containing laked horse blood, vancomycin, polymyxin B, and trimethoprim. C. jejuni and Campylobacter coli were isolated from a 7.1% of random patients with diarrhea and neither organism was isolated from 194 patients with no symptoms of diarrhea. In 1983, Martin used a medium containing cefoperazone which demonstrated enhanced activity against Pseudomonas spp. and improved the recovery of Campylobacter spp. from fecal specimens. Campylobacter Selective Agar has been modified from the original Skirrow formula by the addition of 50 mg/l of cefoperazone.

PRINCIPLE
Proteose peptone provides nutrients in the form of amino acids and peptides. Liver digest supplies nitrogenous compounds and iron. Yeast extract is a source of B-complex vitamins. Sodium chloride supplies essential electrolytes and maintains osmotic equilibrium. Laked horse blood supplies hemin (X factor) and other growth factors. Vancomycin inhibits gram-positive bacteria, polymyxin B inhibits most gram-negative bacilli, and trimethoprim inhibits Proteus spp. Cefoperazone is a cephalosporin antibiotic with enhanced activity against pseudomonads and members of the Enterobacteriaceae. Agar is a solidifying agent.

REAGENTS (CLASSICAL FORMULA)*
Proteose Peptone.............................................................15.0 g
Sodium Chloride ........................................................................5.0 g
Yeast Extract ............................................................................5.0 g
Liver Digest ..............................................................................2.5 g
Cefoperazone .........................................................................50.0 mg
Vancomycin ...........................................................................10.0 mg
Trimethoprim .......................................................................5.0 mg
Polymyxin B .....................................................................2500 IU
Laked Horse Blood ..........................................................50.0 ml
Agar .................................................................................12.0 g
Demineralized Water ...................................................1000.0 mg

pH 7.4 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PROCEDURE
Note: Specimens for isolation of Campylobacter spp. should be placed in a transport medium when a delay in processing of more than 2 hours is anticipated or when a rectal swab is collected. Optimal recovery of Campylobacter spp. from stool specimens is achieved by using a combination of selective media.

1. Inoculate and streak the specimen as soon as possible after it is received in the laboratory. Rectal swabs and liquid stools can be inoculated directly onto Campylobacter Selective Agar. Formed stool specimens should be emulsified in sterile saline (0.85%) prior to inoculation. Place 1 or 2 drops of liquid or formed stool suspension onto agar and streak for isolation.
2. Incubate plate(s) in a microaerophilic environment (mixture of 5% O2, 10% CO2, 85% N2) at 40-42°C for 48-72 hours. Media may be set in duplicate and incubated at 33-37°C, as well as 40-42°C, to allow for the growth of certain Campylobacter spp.
3. Observe for characteristic colonies, which can be flat, irregular, or spreading on fresh media. Some strains appear as a thin film on the agar or form colonies that tail along the line of streaking. On less fresh media, colonies are 1 to 2 mm in diameter, round, convex, and glistening. Colonies can be yellowish to gray or pinkish in color and are nonhemolytic.

QUALITY CONTROL
All lot numbers of Campylobacter Selective Agar have been tested using the following quality control organisms and have been found to be acceptable. This quality control testing meets or exceeds CLSI standards. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, patient results should not be reported.

CONTROL
*Campylobacter jejuni ATCC® 33291
*Escherichia coli ATCC® 25922
Proteus mirabilis ATCC® 12453
Pseudomonas aeruginosa ATCC® 27853
Staphylococcus aureus ATCC® 29523

INCUBATION
Microaerophilic, 48-72 h @ 40-42°C
Ambient, 18-24 h @ 33-37°C
Ambient, 18-24 h @ 33-37°C
Ambient, 18-24 h @ 33-37°C

RESULTS
Good growth
Inhibition (partial to complete)
Inhibition (partial to complete)
Inhibition (partial to complete)

*CLSI recommended organism

LIMITATIONS
1. Campylobacter coli, Campylobacter fetus, and some strains of Campylobacter jejuni are inhibited by cephalosporins.
2. Extending incubation to 72 hours may significantly increase the isolation rate of Campylobacter spp.
BIBLIOGRAPHY


Refer to the front of Remel Technical Manual of Microbiological Media for General Information regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

ATCC® is a registered trademark of American Type Culture Collection.