

Butzler/Agar (Selective agar for *Campylobacter*)

356-3514

DEFINITION

Medium used for the selective enrichment of thermotolerant *Campylobacter* for analysis of food products.

STANDARDS

FOOD MICROBIOLOGY

• **NF EN ISO 10272-1 (April 2006):** Food microbiology - Horizontal method for detection and enumeration of *Campylobacter* spp. - Part 1: Detection method.

PRINCIPLE

The nutrient substances provided by the special mixture of peptones favor the growth of *Campylobacter*.

Due to its combination of cefoperazone, rifampicin, colistin and amphotericin B this medium inhibits other bacteria.

PRESENTATION

Ready-to-use

90 mm x 10 dishes

code 356-3514

STORAGE

• + 2°C to 8°C.

• Expiration date and batch number are shown on the package.

THEORETICAL FORMULA

Columbia base medium

Special blend of peptones	23 g
Starch	1 g
Sodium chloride	5 g
Agar	10 g
Distilled water	1000 ml

Selective supplement

Cefoperazone	150 mg
Rifampicin	150 mg
Amphotericin B	200 mg

+ 5% sterile sheep blood

Final pH (25°C) = 7.3 ± 0.2

EQUIPMENT REQUIRED (NOT SUPPLIED)

(non-exhaustive)

- Thermostatically-controlled incubator or incubation room, precise to ± 1°C
- All usual laboratory equipment.

PROTOCOL

• Preparation of samples

According to standards for the product concerned.

• Enrichment

According to standards for the product concerned.

• Inoculation and incubation

Using an inoculating loop or Pasteur pipette (previously flame-sterilized), streak inoculate the surface of the Butzler medium.

Incubate at 37°C ± 1°C for 24 h - 48 h under micro-aerophilic conditions (5% O₂, 10% CO₂, 85% N₂ throughout incubation).

Incubation at 42°C ± 1°C potentiates the selective effect for thermophilic *Campylobacter* (*C. coli* and *C. jejuni*).

READING AND INTERPRETATION

• Appearance of colonies

- at 24 hours: very small, pin-head sized.
- at 48 hours: bigger, rounded, convex, shiny or very flat with characteristic spreading along the isolation streak.

• Gram-staining on colonies

- 24 - 48 hour cultures: commas, S, short Gram-negative spirals.
- Older cultures: coccoid forms that do not readily absorb Gram-staining and are difficult to sub-culture.

• Biochemical identification of colonies

	<i>C. jejuni</i>	<i>C. coli</i>	<i>C. fetus</i>
Catalase	+	+	+
Oxidase	+	+	+
Culture at 25°C	-	-	+
Culture at 37°C	++	++	+
Culture at 42°C	+++	+++	V
Hippurate hydrolysis	+	-	-

Legend: V = Variable

PRECAUTIONS

Comply with Good Laboratory Practice.

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V3 – 05/08/11

PERFORMANCES / QUALITY CONTROL OF THE TEST

The growth performances of the media are verified with the following strains:

STRAINS	Results after 48h culture at 35°C - 38°C
<i>Staphylococcus aureus</i> ATCC 25923	Inhibition
<i>Salmonella</i> Typhimurium ATCC 14028	Inhibition
<i>Candida albicans</i> ATCC 2091	Inhibition
<i>Campylobacter jejuni</i>	Good growth
<i>Campylobacter coli</i>	Good growth

QUALITY CONTROL OF MANUFACTURER

Every product manufactured and marketed by Bio-Rad is subject to a quality-assurance procedure at all stages, from the reception of raw materials to the marketing of the end-product. Each batch of finished product undergoes quality control and is marketed only if it satisfies the acceptability criteria.

Documentation relative to the production and control of each batch is kept on file.

KEY WORDS

Butzler / *Campylobacter* / Food products / Selective enrichment / Antibiotics / Medium.