

## Technical Information

### PE-2 MiVeg Medium

#### Product Code : VM1611

**Application:-** PE-2 MiVeg Medium is used for detection and cultivation of mesophilic anaerobic spore-formers in specimens collected from food processing plants.

#### Composition

Ingredients	Gms / Litre
MiVeg peptone	20.0
Yeast extract	3.0
Bromo cresol purple	0.04

\*\* Formula adjusted, standardized to suit performance parameters.

#### Principle & Interpretation

PE-2 MiVeg Medium is prepared by adding MiVeg peptone in place of animal origin peptones thus making the medium BSE/TSE risks free. PE-2 MiVeg Medium is the modification of PE-2 Medium which is formulated as described by Folinazzo and Troy (1) and recommended by APHA (2) for detection and cultivation of mesophilic anaerobic spore-formers in specimens from food processing plants. These organisms mainly include the genus *Clostridium*. *Clostridial* growth range covers the temperature of the normal storage of canned and other processed foods including refrigerated storage of cured meats and hence these anaerobes are important in the spoilage of low-acid foods packed in the hermetically sealed containers.

MiVeg peptone and yeast extract supplies all the essential growth nutrients to the growing organisms. Addition of untreated alaska seed peas creates anaerobic conditions in the medium thereby supports *Clostridium* to grow anaerobically. Prepared samples of heated sugar, dehydrated vegetables and spices are cultured by taking 20 ml portions of these heated substances and dividing equally among 6 tubes of freshly heated culture medium. Incubate at 30-35°C for 72 hours or up to 7 days if desired as some spores germinate slowly.

#### Methodology

Suspend 23 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Dispense 18-20 ml aliquots into 18-150 mm screw cap test tubes. Add 8-10 untreated Alaska seed peas and let the tubes stand for 1 hour to effect hydration. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

#### Quality Control

##### Physical Appearance

Yellow coloured, may have slight greenish tinge, homogeneous, free flowing powder.

##### Colour and Clarity of prepared medium

Purple coloured, clear to slightly opalescent solution over alaska seeds.

##### Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth
<i>Clostridium botulinum</i> (25763)	$10^2$ - $10^3$	good-luxuriant
<i>Clostridium sporogenes</i> (11437)	$10^2$ - $10^3$	good-luxuriant
<i>Clostridium thermosaccharolyticum</i> (7956)	$10^2$ - $10^3$	good-luxuriant

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 day.

## Further Reading

1. Folinazzo J.F. and Troy V.S., 1954, Food Technol., 8:280.
2. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4<sup>th</sup> ed., APHA, Washington, D.C.

## Disclaimer :

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