

## Casman Medium Base (NCM0141)

### Intended Use

Casman Medium Base is used with blood for the isolation of *Haemophilus influenzae*, *Neisseria gonorrhoeae* and other fastidious microorganisms in a laboratory setting. Casman Medium Base is not intended for use in the diagnosis of disease or other conditions in humans.

### Description

In 1947, Casman described an infusion-free medium enriched with 5% blood for fastidious microorganisms incubated anaerobically. This medium replaced formulas containing fresh meat infusion and heated blood. Casman adjusted the formula after experiments revealed nicotinamide disrupted the action of a blood enzyme that inactivates V factor (NAD). The concentration of nicotinamide was lowered to support growth of *Neisseria* spp.

### Typical Formulation

Enzymatic Digest of Casein	5.0 g/L
Enzymatic Digest of Animal Tissue	5.0 g/L
Yeast Extract	10.0 g/L
Beef Extract	3.0 g/L
Niacinamide	0.05 g/L
p-Aminobenzoic Acid	0.05 g/L
Dextrose	0.5 g/L
Corn Starch	1.0 g/L
Sodium Chloride	5.0 g/L
Agar	13.5 g/L

Final pH: 7.3 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

### Precaution

Refer to SDS

### Preparation

1. Suspend 43 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C and aseptically add 5% sterile blood and 0.15% sterile water-lysed blood solution (one part blood to three parts water).

### Quality Control Specifications

**Dehydrated Appearance:** Powder is homogeneous, free flowing, and beige.

**Prepared Appearance:** Prepared medium without blood is trace to slightly hazy and light to medium amber. Prepared medium supplemented with 5% sheep blood is opaque and red.

**Expected Cultural Response:** Cultural response on Casman Medium Base supplemented with blood at 35°C after 18 - 24 hours incubation.

# Technical Specification Sheet



Microorganism	Approx. Inoculum (CFU)	Expected Results
<i>Haemophilus influenzae</i> ATCC® 35056	50-200	Growth
<i>Neisseria gonorrhoeae</i> ATCC® 43070	50-200	Growth
<i>Neisseria meningitidis</i> ATCC® 19424	50-200	Growth
<i>Streptococcus pneumoniae</i> ATCC® 6305	50-200	Growth
<i>Streptococcus pyogenes</i> ATCC® 19615	50-200	Growth

The organisms listed are the minimum that should be used for quality control testing.

## **Test Procedure**

Refer to appropriate references for specific procedures on the isolation and identification of fastidious microorganisms.

## **Results**

Refer to appropriate references for results.

## **Expiration**

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

## **Limitations of the Procedure**

1. Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.
2. Niacinamide in concentrations greater than 0.005% may inhibit growth of some *N. gonorrhoeae* strains; however, only slight stimulation of growth of *H. influenzae* occurs with this amount.
3. Casman Medium Base is intended for use with supplementation. Biochemical and immunological testing using pure cultures are recommended for complete identification.

## **Storage**

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

## **References**

1. Casman, E. P. 1947. A noninfusion blood agar base for *Neisseriae*, *Pneumococci* and *Streptococci*. Am. J. Clin. Pathol. 27:281.
2. Casman, E. P. 1942. J. Bacteriol. 43:33.
3. Casman, E. P. 1947. J. Bacteriol. 53:561.

