# Product Insert

# CDC ANAEROBIC BLOOD AGAR (CDC)

## Products

AS-646 CDC Anaerobic Blood Agar (CDC) 4 plates / pkg

## Intended Use

CDC Anaerobic Blood Agar (CDC) is an enriched and differential media used for the growth and partial identification of obligate anaerobes. It supports good growth of aerobic, facultative anaerobic, and microaerophilic organisms found in clinical materials if incubated under the appropriate conditions.

## Summary

CDC is a tryptic soy agar base supplemented with vitamin $K_1$ and hemin to facilitate the recovery of more fastidious organisms, such as *Prevotella*, *Porphyromonas*, and the *Bacteroides fragilis* group, and should facilitate the pigment production of *Prevotella melaninogenica*. Sheep blood is added for the observation of hemolytic reactions as seen by the double zone of β-hemolysis of *Clostridium perfringens,* and various growth factors. This media is prepared, dispensed, and packaged under oxygen-free conditions to prevent the formation of oxidized products prior to use.

## Formulation

| | | |
|---|---|---|
| Pancreatic Digest of Casein | 15.00 | g |
| Soy Peptone | 5.00 | g |
| Sodium Chloride | 5.00 | g |
| Agar | 15.0 | g |
| Yeast Extract | 5.00 | g |
| L-Cystine | 0.40 | g |
| Sodium Hydroxide | 4.00 | mL |
| Hemin (4.0% solution) | 5.00 | mL |
| Vitamin $K_1$ (0.1% solution) | 1.00 | mL |
| Sheep Blood | 50.00 | mL |
| DI Water | 1.00 | L |

Final pH: 7.2 ± 0.2 at 25 °C
Final weight: 16.0 g ± 1.6 g

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

## Precautions

For *IN VITRO DIAGNOSTIC USE* only. Utilize approved biohazard precautions and aseptic technique when using this product. This product is for use only by properly trained and qualified personnel. Sterilize all biohazard waste prior to disposal.

## Storage and Shelf Life

**Storage:** Upon receipt, store at room temperature in original container until use. Avoid overheating or freezing. Do not use media if there are signs of deterioration (shrinking, cracking, or discoloration due to oxidation of media) or contamination. The expiration date applies to the product in its original packaging and stored as directed. Do not use product past the expiration date shown on the container.

**Shelf Life:** 90 days from date of manufacture.

## Procedure

**Specimen Collection:** Protect specimens for anaerobic culture from oxygen during collection, transportation, and processing. Consult appropriate references for detailed instructions concerning collection and transportation of anaerobes.

**Methods for Use:** CDC should be inoculated directly with clinical specimen or from a broth that has been inoculated from a clinical specimen. Streak plates with inoculum to obtain isolated colonies and immediately place into an anaerobic atmosphere, incubating at 35-37°C for 18-48 hours. Extended periods of incubation may be required to recover some anaerobes. Detailed instructions for processing anaerobic cultures can be found in the listed references.

## Materials Required, But Not Provided

Standard microbiological supplies and equipment such as loops, saline blanks, slides, staining supplies, microscope, incinerator / autoclave, incubators, anaerobic chamber / anaerobic jars, disinfectant, other culture media, and serological / biochemical reagents.

## Interpretation of Results

If used properly, CDC supports the growth of obligate anaerobes found in clinical infections. In addition, the media should support typical pigment production by pigmented *Prevotella* and *Porphyromonas* spp. The media should support typical double zone of β-hemolysis around colonies of *Clostridium perfringens*.

## Limitations

CDC Anaerobic Blood Agar will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. It is recommended that a selective media such as Anaerobic Brucella Laked Blood Agar with Kanamycin and Vancomycin (LKV, catalog#: AS-112) and/or Anaerobic Brucella Blood Agar with Phenylethyl Alcohol (PEA, catalog#: AS-113) also be inoculated with clinical specimens to assure growth of all species present. Consult reference materials for additional information.

## Quality Control

The following organisms are routinely used for quality assurance performance testing at Anaerobe Systems.

| Organism Tested | ATCC # | Results | Time | Special Reaction |
|---|---|---|---|---|
| Bacteroides fragilis * | 25285 | Growth | 24 hrs | |
| Prevotella melaninogenica * | 25845 | Growth | 24-48 hrs | Pigment[t] (tan to brown) |
| Fusobacterium necrophorum | 25286 | Growth | 24 hrs | |
| Fusobacterium nucleatum * | 25586 | Growth | 24 hrs | |
| Clostridium perfringens * | 13124 | Growth | 24 hrs | Double zone β-hemolysis |
| Peptostreptococcus anaerobius * | 27337 | Growth | 24 hrs | |
| Staphylococcus aureus or<br>Enterococcus faecalis | 25923<br>29212 | Growth<br>Growth | 24 hrs<br>24 hrs | |
| Escherichia coli | 25922 | Growth | 24 hrs | |
| Proteus mirabilis | 12453 | Growth | 24 hrs | |
| Clostridium difficile or<br>Propionibacterium acnes | 9689<br>6919 | Growth<br>Growth | 24 hrs<br>24-48 hrs | |

*Organisms specified by CLSI for Quality Control testing for Anaerobic Blood Agars

[t] Pigment production may require more than 48 hours of incubation.

User Quality Control: The final determination to the extent and quantity of user laboratory quality control must be determined by the end user.

If sterility testing is to be performed on this product, a representative sample of the lot(s) should be incubated anaerobically and aerobically for 48 – 96 hours.

If the nutritive capacity of this media is to be tested for performance, it is recommended that the following ATCC organisms be evaluated for growth.

| Organism | ATCC # | Expected Growth | Special Reactions |
|---|---|---|---|
| B. fragilis | 25285 | 24 hrs | |
| P. melaninogenica | 25845 | 48 hrs | Pigment |
| F. nucleatum | 25586 | 24 hrs | |
| C. perfringens | 13124 | 24 hrs | Double zone β-hemolysis |
| P. anaerobius | 27337 | 24 hrs | |

Physical Appearance: CDC is opaque burgundy red in color.

## References

1. Dowell, V. R., Jr., G. L. Lombard, F. S. Thompson and A. Y. Armfield. 1977. *Media for the Isolation, Characterization and Identification of Obligately Anaerobic Bacteria.* USDHHS, CDC. Atlanta, GA 30333.

2. Engelkirk, P. G., Duben-Engelkirk, J. and Dowell, V. R. 1992. *Principles and Practices of Clinical Anaerobic Bacteriology*. Star Publishing Co., Belmont, CA 94002.

3. Holdeman, L. V., F. P. Cato and W. E. C. Moore. 1987. *Anaerobe Laboratory Manual*. Virginia Polytechnic Institute and State University. Blacksburg, VA 24061

4. Jousimeis-Somer, H. R., Summanen, P., Citron, D. M., Baron, E. J., Wexler, H. M. and S. M. Finegold. 2002. *Wadsworth – KYL Anaerobic Bacteriology Manual*. Star Publishing Co., Belmont, CA 94002.

5. CLSI. *Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard- Third Edition.* (2004). CLSI document M22-A3. CLSI, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898.

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