

# American Society for Testing and Materials (ASTM)

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โดย : จิรวัดน์ พรหมพร

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แผนกฝึกอบรม

บริษัท บัคโปรโมชัน แอนด์ เซอร์วิส จำกัด

ปรับปรุงครั้งล่าสุด 09/05/50

# Introduction

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ASTM International หรือเดิมเรียกว่า American Society Testing and Materials เป็นองค์กรที่ไม่หวังผลกำไร ก่อตั้งขึ้นในปี 1898 ปัจจุบันมีสมาชิกมากกว่า 30,000 สมาชิกจาก 100 กว่าประเทศทั่วโลก ซึ่งให้มาตรฐานในเรื่อง materials, products, systems และ services ที่เชื่อถือได้สำหรับการวิจัยและพัฒนา, ทดสอบผลิตภัณฑ์ คุณภาพของระบบ และสำหรับการค้าทั่วโลก

# Introduction

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ASTM Journals ผลิตโดย ASTM International ให้บริการแก่หน่วยงานเฉพาะและสมาคมทางวิศวกรรมเพื่อเผยแพร่งานวิจัยและนำเสนอบทความสถานการณ์ต่างๆ ทางด้าน physical, life sciences และ engineering technologies สำหรับการพัฒนามาตรฐานทางด้านวิศวกรรมต่างๆ ประกอบด้วยวารสารทั้งหมด 5 รายชื่อ ได้แก่ Cement Concrete and Aggregates, Geotechnical Testing Journal, Journal of Composites Technology and Research, Journal of Forensic Sciences, และ Journal of Testing and Evaluation.

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- A5 - Withdrawn 1979: Specification for High-Carbon Steel Joint Bars
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- A7 - Withdrawn 1967: Specification for Steel for Bridges and Building
- A8 - Withdrawn 1963: Specification for Structural Nickel Steel
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- ANS/ISO11195 - Gas Mixers for Medical Use—Stand-alone Gas Mixers Approved as an American National Standard with Deviations by ASTM international
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- ANS/IEC60601.2.12 - Medical Electrical Equipment—Part 2-12; Particular Requirements for the Safety of Lung Ventilators—Critical Care Ventilators Approved as an American National Standard with Deviations by ASTM International
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- ANS/ISO5366.1 - Anaesthetic and Respiratory Equipment—Tracheostomy Tubes—Part 1: Tubes and Connectors for Use in Adults Approved as an American National Standard by ASTM International
- ANS/ISO17025 - General Requirements for the Competence of Testing and Calibration Laboratories
- ANS/ISO7767 - Oxygen Monitors for Monitoring Patient Breathing Mixtures-Safety Requirements Approved as an American National Standard with Deviations by ASTM International

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<input type="checkbox"/>	5	<b>D5916-96(2002) Standard Test Method for Detection and Enumeration of <i>Clostridium perfringens</i> from Water and Extracted Sediments by Membrane Filtration (MF)</b> <i>Active Test Method 2/10/1996; Year: 96(2002); P.8</i>	
<input type="checkbox"/>	6	<b>WK12452- Standard Guide for Set of Data Elements to Describe a Ground-Water Site; Part Three-Usage Descriptors</b> <i>Proposed ; P.0</i>	
<input type="checkbox"/>	7	<b>D5410-93(1998) Standard Guide for Set of Data Elements to Describe a Ground-Water Site; Part Three-Usage Descriptors</b> <i>Active Guide 12/10/1998; Year: 93(1998); P.12</i>	
<input type="checkbox"/>	8	<b>WK12785- Standard Guide for Monitoring Aqueous Nutrients in Watersheds</b> <i>Proposed ; P.0</i>	
<input type="checkbox"/>	9	<b>D6146-97(2002) Standard Guide for Monitoring Aqueous Nutrients in Watersheds</b> <i>Active Guide 6/10/1997; Year: 97(2002); P.7</i>	
<input type="checkbox"/>	10	<b>D6146-97 Standard Guide for Monitoring Aqueous Nutrients in Watersheds</b> <i>Historical Guide 6/10/1997; Year: 97; P.7</i>	

1. คำค้นที่ใช้และจำนวนผลลัพธ์ที่ได้

2. เลือกสืบค้นภายในผลลัพธ์เดิมหรือสืบค้นใหม่

3. เลือกเรื่องที่ต้องการ



Search for: "water quality"

## D5916-96(2002) Standard Test Method for Detection and Enumeration of *Clostridium perfringens* from Water and Extracted Sediments by Membrane Filtration (MF)

Active Test Method 2/10/1996; Year: 96(2002); P. 8

Developed by Subcommittee:  D19.24

- Index Terms:
- anaerobic bacteria
  - Clostridium*
  - Clostridium perfringens*
  - indicator organisms
  - pollution
  - spore-forming bacteria
  - water quality**
  - 07.100.20

Standards Type:  Test Method

Book of Standards Volume: 11.02

Ranked No. 5 in search results.

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Refine your search by selecting check boxes (on the left and below):

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### 1. SCOPE:

1.1 This test method can enumerate *Clostridium perfringens* spores and vegetative cells from marine water, sediment, wastewater, ambient water, and drinking water. Since *C. perfringens* spores are present in large numbers in human and animal wastes and are resistant to wastewater treatment practices, extremes in temperature, and environmental stress, they are an indicator of present fecal contamination as well as a conservative tracer of past fecal contamination. It is the user's responsibility to ensure the validity of this test method for waters of untested matrices.

1.2 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

### 2. Referenced Documents:

- D1129 - Terminology Relating to Water
- D1193 - Specification for Reagent Water
- D1888 Methods of Test for Particulate and Dissolved Matter in Water
- D2777 - Practice for Determination of Precision and Bias of Applicable Methods of Committee D19 on Water
- D3370 - Practices for Sampling Water from Closed Conduits
- D3863 - Test Method for Membrane Filtration (MF) for *Clostridium perfringens* Used in Routine Filtration Procedures for the Evaluation of
- D3870 Practice for Establishing the Validity of Membrane Filtration Methods in Bacteriology
- D5465 - Practice for Determination of *Clostridium perfringens* in Water by Membrane Filtration and Methods
- E200 - Practice for Preparation of Standard Solutions for Chemical Analysis

**เลือกแสดงเอกสารฉบับเต็ม**

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96 (Reapproved 2002)

## Standard Test Method for Detection and Enumeration of *Clostridium perfringens* from Water and Extracted Sediments by Membrane Filtration (MF)<sup>1</sup>

This standard is issued under the fixed designation D 5916; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last approval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This test method can enumerate *Clostridium perfringens* spores and vegetative cells from marine water, sediment, wastewater, ambient water, and drinking water. Since *C. perfringens* spores are present in large numbers in human and animal wastes and are resistant to wastewater treatment practices, extremes in temperature, and environmental stress, they are an indicator of present fecal contamination as well as a conservative tracer of past fecal contamination. It is the user's responsibility to ensure the validity of this test method for waters of untested matrices.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

### Waters Analyzed by Plating Methods

E 200 Practice for Preparation, Standardization, and Storage of Standard and Reagent Solutions for Chemical Analysis

### 3. Terminology

3.1 *Definitions*—For definitions of terms used in this test method, refer to Terminology [D 1129](#).


3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *Clostridium perfringens*—in this test method, *C. perfringens* is defined as an obligate anaerobic gram-positive, spore forming, nonmotile bacillus, 0.9–1.3 by 3.0–9.0  $\mu\text{m}$  in size that ferments sucrose, ferments lactose with stormy gas production, does not ferment cellobiose, and produces acid phosphatase. *Clostridium perfringens* also produces toxins which cause gas gangrene and gastroenteritis.


3.2.2 *spores*—*C. perfringens* produces single oval subter-

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*Active Practice 7/1/2004; Year: 04; P.15*
- 2 **D6725-01 Standard Practice for Direct Push Installation of Prepacked Screen Monitoring Wells in Unconsolidated Aquifers**   
*Historical Practice 11/10/2001; Year: 01; P.15*
- 3 **D5851-95(2006) Standard Guide for Planning and Implementing a Water Monitoring Program**   
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- 4 **D5851-95(2000) Standard Guide for Planning and Implementing a Water Monitoring Program**   
*Historical Guide 1/1/2000; Year: 95(2000); P.9*
- 5 **D5916-96(2002) Standard Test Method for Determination of *Perfringens* from Water and Extracted Sediments by Membrane Filtration (MF)**   
*Active Test Method 2/10/1996; Year: 96(2002); P.7*
- 6 **WK12452- Standard Guide for Set of Data Elements to Describe a Ground-Water Site; Part Three-Usage Descriptors**   
*Proposed ; P.0*
- 7 **D5410-93(1998) Standard Guide for Set of Data Elements to Describe a Ground-Water Site; Part Three-Usage Descriptors**   
*Active Guide 12/10/1998; Year: 93(1998); P.12*
- 8 **WK12785- Standard Guide for Monitoring Aqueous Nutrients in Watersheds**   
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- 9 **D6146-97(2002) Standard Guide for Monitoring Aqueous Nutrients in Watersheds**   
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- 17 **D6452-99 Standard Guide for Purging Methods for Wells Used for Groundwater**  
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- 18 **E1469-92(1997) Standard Practice for Collecting Benthic Macroinvertebrates with Multiple-Plate Samplers**  
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- 19 **E1468-92(1997) Standard Practice for Collecting Benthic Macroinvertebrates with the Basket Sampler**  
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- 20 **D5244-92(2004) Standard Practice for Recovery of Enteroviruses from Waters**  
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- 21 **WK3129- Standard Practice for Direct Push Installation of Prepacked Screen Monitoring Wells in Unconsolidated Aquifers**  
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- 22 **D6726-01 Standard Guide for Conducting Borehole Geophysical Logging-Electromagnetic Induction**  
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- 23 **D5244-92(1998) Standard Practice for Recovery of Enteroviruses from Waters**  
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- 24 **WK904- STANDARD PERFORMANCE SPECIFICATION FOR MAINTENANCE OF WATER QUALITY IN AMUSEMENT RIDES AND DEVICES WHERE BY DESIGN RIDERS OR OBSERVERS ARE CONTACTED WITH WATER**  
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ASTM International publishes a number of journals to serve the international scientific and engineering community through the timely publication of the results of original research and critical review articles in the physical and life sciences and engineering technologies. These peer-reviewed papers cover diverse topics relevant to the science and research that establish the foundation for standards development within ASTM International.

The Journals included in this collection include: Cement, Concrete and Aggregates, Geotechnical Testing Journal, Journal of Composites Technology and Research, Journal of Forensic Sciences, and Journal of Testing and Evaluation.

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- Journal of Testing and Evaluation ARCHIVE▶
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Volume: 26, Issue: 2 (2004)

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### Abstract:

If a concrete specimen is tested to failure in compression and the machine allows the longitudinal strain in the specimen to be non-uniform over the cross-section of the specimen at its maximum load, then that load is lower than it would be if the strains were uniform. The results of an experimental study on the magnitude of the effect of non-uniform straining on apparent concrete strength are presented, showing how it varies for low, medium, and high strength concrete. Simple theoretical modeling is shown to reproduce the measured results well. Suggestions are also included for the application of the information presented.



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