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ICS 75.080

WITHDRAWAL

May 2005

Methods of Testing Petroleum and Associated Products

Prologue to the Petroleum Test Methods and Table of Contents

This CGSB method is hereby withdrawn due to limited use and support for its revision.

RETRAIT

Mai 2005

Méthodes d'essai des produits pétroliers et produits connexes

Prologue des méthodes d'essai des produits pétroliers et table des matières

Cette méthode de l'ONGC est retirée par le présent avis en raison de son utilisation limitée et du manque de support pour sa révision.

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No. 0-95

Methods of Testing Petroleum and Associated Products

Prologue to the Petroleum Test Methods and Table of Contents

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National Standard of Canada

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K1A 1G6

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The principal objectives of the Council are to foster and promote voluntary standardization as a means of advancing the national economy, benefiting the health, safety and welfare of the public, assisting and protecting the consumer, facilitating domestic and international trade, and furthering international co-operation in the field of standards.

A National Standard of Canada is a standard which has been approved by the Standards Council of Canada and one which reflects a reasonable agreement among the views of a number of capable individuals whose collective interests provide, to the greatest practicable extent, a balance of representation of producers, users, consumers and others with relevant interests, as may be appropriate to the subject in hand. It normally is a standard that is capable of making a significant and timely contribution to the national interest.

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The responsibility for approving National Standards of Canada rests with the:

Standards Council of Canada
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NATIONAL STANDARD OF CANADA

CAN/CGSB-3.0
No. 0-95

METHODS OF TESTING PETROLEUM AND ASSOCIATED PRODUCTS

PROLOGUE TO THE PETROLEUM TEST METHODS AND TABLE OF CONTENTS

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Approved by the
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Acknowledgment is made for the translation of this National Standard of Canada by the Translation Bureau of the Department of the Secretary of State.

National Standard of Canada

CGSB Ottawa Canada K1A 1G6	METHODS OF TESTING PETROLEUM AND ASSOCIATED PRODUCTS	CAN/CGSB-3.0
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Supersedes Issue of
August 1990

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Note: *Lists in sections B, C and D will not include methods added or withdrawn since the latest updating of this prologue.*

Withdrawn/Retirée

SECTION A

PROLOGUE

INTRODUCTION

The purpose of this prologue is to provide the user of CGSB Petroleum Test Methods (PTM) with general information that relates to all of the test methods. Rather than fill every method with an extensive statement on background, assumptions, safety statements, and reporting protocols, the CGSB PTM Committee considered it was more appropriate to put this general information into a single document, CAN/CGSB-3.0 No. 0-95, which would then be applicable to all test methods.

The PTM Committee develops and maintains test methods which are specific to Canadian standards for Canadian products, where suitable tests do not already exist in recognized standards bodies such as the American Society for Testing and Materials (ASTM). Thus, most of the CGSB methods are tests that were developed for unique Canadian product applications, or unique to Canadian raw materials. For example, the CGSB Cetane Index Method was developed because the standard ASTM procedures were found to be unsuitable for Canadian diesel fuels which contained significant levels of components derived from synthetic crude oils. In other cases, for example, the Low Temperature Flow Test, a need existed because of the low temperatures prevalent across Canada in wintertime that had not at that time been addressed by ASTM.

COMMITTEE SCOPE

The CGSB PTM Committee is responsible for developing, modifying, updating and deleting test methods relating to petroleum products such as fuels, lubricants, industrial oils and greases, and associated products. With the guidance of the CGSB Petroleum Coordinating Committee regarding priorities, the CGSB PTM Committee will develop and evaluate test procedures requested by petroleum product standards committees for product standards.

The committee may also pursue method development or evaluation of tests or procedures which are of general use to the Canadian petroleum and other industries and governments. However, the committee will generally restrict its activities to test methods which are unavailable from major standards organizations, such as the International Organization for Standardization (ISO) and ASTM.

The committee will maintain liaison with the petroleum product standards committees, and report on its activities to the CGSB Petroleum Coordinating Committee. In addition, the committee will give direction to the Canadian International Exchange Program for testing fuels, lubricants, used lubricants and greases through the Exchange Operations and Review Panel. This panel conducts special exchanges and seminars, as appropriate. The committee will contribute to international standards activities by providing assistance to the Canadian Advisory Committee for ISO/TC 28 on test methods. In addition, the committee will encourage research and development within Canada on petroleum test methods, and facilitate the exchange of information on new method developments among members. The committee will normally meet twice a year, in concert with the other petroleum committee meetings, to pursue test method developments in a timely manner.

HEALTH AND SAFETY

There are two "official" CGSB statements on health and safety hazards. The first statement is on the inside cover of all CGSB standards:

> "Many tests required by CGSB standards are inherently hazardous. CGSB neither assumes nor accepts any responsibility for any injury or damage that may occur during or as the result of tests, wherever performed."

The second statement is intended for use within the text of the test method itself:

> "The testing and evaluation of a product against this method may require the use of materials and/or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this method has the responsibility to consult the appropriate authorities and to establish appropriate health and safety practices in conjunction with any existing applicable regulatory requirements prior to its use."

Withdrawn/Retired

Originally many CGSB Petroleum Test Methods contained a variety of caution or safety statements relating to toxic chemicals or hazardous materials. However, since the implementation of WHMIS legislation requiring ready availability of Material Safety Data Sheets (MSDS), the CGSB PTM Committee has removed most caution statements. The availability of MSDS provides laboratory personnel with complete and up-to-date health, hazard and toxicological information for all chemicals used in the laboratory. MSDS are developed by industrial hygienists and medical personnel. The CGSB PTM Committee recommends that all users of petroleum test methods should refer to Material Safety Data Sheets for all chemicals and materials specified in a test method. Only unusual procedures or particularly hazardous materials will be cautioned in most petroleum test methods.

The PTM Committee has made the general assumption that all people who use petroleum test methods are competent technical personnel who have been trained in proper laboratory practices. It is neither reasonable nor feasible to write test methods for a person who is totally untrained in chemical techniques and is operating without adequate supervision. Whenever a petroleum test method is being used (especially for the first time in a laboratory, or for the first time by an individual) it is the responsibility of the person in charge to ensure that the laboratory individual understands the test method fully, is aware of any hazards due to the chemicals, materials, or procedures, and that the right equipment and facilities are available for the safe performance of the test. Thus, the person responsible for a laboratory facility must establish appropriate procedures to ensure the safety of all personnel.

INTERPRETATION OF TEST METHOD RESULTS

The reporting section of a petroleum test method has been carefully written to specify the number of significant digits or the exact form of the result. A person using the test method should ensure that his result follows the correct reporting procedure.

If a particular piece of apparatus or instrument gives a test result with more significant digits than called for by the specific petroleum test method, the rounding off procedure given in ASTM E 29, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications, should be used to reduce the result to the correct number of significant digits.

When a laboratory performs two or more tests on an identical sample, the result reported should be the numerical average of the results, with the application (if necessary) of the ASTM E 29 rounding off procedure to bring the average result to the correct number of significant digits.

While it is the intention of the PTM Committee to ensure that its methods call for the correct number of significant digits (or the correct form of reporting results), it is ultimately the responsibility of a CGSB petroleum product standard committee to specify the appropriate number of significant digits for its requirements.

TABLE OF CONTENTS

The following sections in CAN/CGSB-3.0 No. 0-95 contain a numerical list of all petroleum test methods by test number and title, including the standards which call up the test methods. To assist users of test methods, there is also an alphabetical list of petroleum test methods. Lists will not include methods approved and added since the latest updating of this prologue.

ASTM Volumes (e.g. Volumes 5.01 to 5.03) contain current lists of similar and equivalent standards: ISO standards, IP (Institute of Petroleum — U.K.), API, and Federal Test Methods Standard 791C. Since many of these standards from other organizations are changing on a regular basis, the CGSB PTM Committee considers it is preferable to refer people who use standards to the most current listings and cross references (in ASTM volumes), since it is not feasible to constantly update lists in a CGSB publication.

At the end of CAN/CGSB-3.0 No. 0-95, there is a list of all withdrawn CGSB Petroleum Test Methods.

Withdrawn/Retiree

SOURCES OF COMMON REFERENCED PUBLICATIONS

The Canadian General Standards Board (CGSB) publications may be obtained from the Canadian General Standards Board, Sales Centre, Ottawa, Canada K1A 1G6. Telephone (613) 941-8703 or 1-800-665-CGSB (Canada only). Fax (613) 941-8705.

The ASTM publications may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103, U.S.A., or photocopies are available from the CGSB Sales Centre.

The International Organization for Standardization (ISO) publications may be obtained from the Standards Council of Canada, Standards Sales Branch, 45 O'Connor Street, Suite 1200, Ottawa, Ontario K1P 6N7.

The Federal Test Method Standard (FTMS) publications may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, U.S.A.

The American Petroleum Institute (API) publications may be obtained from the American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005, U.S.A.

The Institute of Petroleum (IP) publications may be obtained from the Institute of Petroleum, 61 New Cavendish Street, London W1M 8AR, U.K.

Withdrawn/Retiree

SECTION B

NUMERICAL LIST OF CGSB PETROLEUM TEST METHODS

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15.0	Standard Test Method for the Determination of Aromatic Hydrocarbons by Their Ring Number in Petroleum Middle Distillates by Supercritical Fluid Chromatography	
18.5	Test for Ethyl Mercaptan Odourant in Propane, Field Method	
19.5	Determination of Lead in Automotive Gasoline (Atomic Absorption)	CAN/CGSB-3.1-92
20.9	CGSB Cetane Index of Diesel Fuels	CAN/CGSB-3.6-M90 3-GP-11c CAN/CGSB-3.16-95 CAN/CGSB-3.18-92
28.8	Visual Haze Rating of Distillate Fuel Oils	
36.4	Flow Point of Boiler Fuel Oil	
48.2	Thickener Content of Petroleum-Based Lubricating Grease	
49.6	Water Wash Resistance and Sea Water Corrosion Protection	3-GP-664c
80.8	Performance of Lubricating Grease in Antifriction Bearings (Size 310)	3-GP-691b
94.1	Phosphate Content of Inhibited Glycols	3.856
105.3	Sulfates in Uninhibited Ethylene Glycol	
121.1	1,2-Glycols in Glycol Mixtures	3.856
122.1	Chlorides in Glycol	3.856
122.2	Benzotriazole or Tolyltriazole in Aircraft Deicing-Defrosting Fluids (Volumetric Method)	3.856
128.1	Sodium di-(2-Ethylhexyl) Sulfosuccinate Content	3.856
140.1	Low Temperature Flow Test (LTFT) for Diesel Fuels	CAN/CGSB-3.6-M90 CAN/CGSB-3.16-95 CAN/CGSB-3.18-92 CAN/CGSB-3.517-93

Withdrawn/Retirée

SECTION C

ALPHABETICAL LIST OF CGSB PETROLEUM TEST METHODS

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Aircraft Fluids:	
Benzotriazole and Tolyltriazole in Aircraft Deicing-Defrosting Fluids (Volumetric Method)	122.2
Benzotriazole in Aircraft Deicing-Defrosting Fluids (see Aircraft Fluids)	
Boiler Fuel Oil, Flow Point of	36.4
Cetane Index of Diesel Fuels, CGSB	20.9
Chlorides in Glycol	122.1
Determination of Lead in Automotive Gasoline (Atomic Absorption)	19.5
Diesel fuels:	
CGSB Cetane Index of Diesel Fuels	20.9
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Ethyl Mercaptan Odourant in Propane, Field Test Method	18.5
Flow Point of Boiler Fuel Oil	36.4
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Gasoline:	
Determination of Lead in Automotive Gasoline (Atomic Absorption)	19.5
Standard Test Method for the Identification of Hydrocarbon Components in Automotive Gasoline Using Gas Chromatography	14.3
Standard Test Method for the Determination of Aromatic Hydrocarbons by Their Ring Number in Petroleum Middle Distillates by Supercritical Fluid Chromatography	15.0
Glycols:	
Chlorides in Glycol (Qualitative Detection)	122.1
1,2-Glycols in Glycol Mixtures	121.1
Sulfates in Uninhibited Ethylene Glycol	105.3
Phosphate Content of Inhibited Glycols	94.1
Grease:	
Performance of Lubricating Grease in Antifriction Bearings (Size 310)	80.8
Thickener Content of Petroleum-Based Lubricating Grease	48.2
Haze, Visual — (see Rating of Distillate Fuel Oils)	
Low Temperature Flow Test (LTFT) for Diesel Fuels	140.1
Phosphate Content of Inhibited Glycols	94.1
Prologue to the Petroleum Test Methods and Table of Contents	0
Propane, Field Test Method for Ethyl Mercaptan Odourant in	18.5
Rating of Distillate Fuel Oils, Visual Haze	28.8

Withdrawn/Retirée

Title	Method Number
Sea Water Corrosion Protection and Water Wash Resistance	49.6
Standard Test Method for the Determination of Aromatic Hydrocarbons by Their Ring Number in Petroleum Middle Distillates by Supercritical Fluid Chromatography	15.0
Standard Test Method for the Identification of Hydrocarbon Components in Automative Gasoline Using Gas Chromatography	14.3
Sodium di-(2-Ethylhexyl) Sulfosuccinate	128.1
Sulfates in Uninhibited Ethylene Glycol	105.3
Table of Contents and Prologue to the Petroleum Test Methods	0
Thickener Content of Petroleum-Based Lubricating Grease	48.2
Tolyltriazole in Aircraft Deicing-Defrosting Fluids — (see Aircraft Fluids)	
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Withdrawn/Retirée

SECTION D

NUMERICAL LIST OF WITHDRAWN CGSB PETROLEUM TEST METHODS

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2.12	Acidity of Ethylene Glycol	Replaced by ASTM D 1613
2.13	Acidity of Tricresyl Phosphate	
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Withdrawn/Retirée

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Withdrawn/Retirée

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Withdrawn/Retirée

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108.5a	Effect of Engine Lubricating Oils on Ring-Sticking, Wear and the Accumulation of Deposits under Medium Speed Supercharged Conditions with High Sulfur Content Fuel	

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Method Number	Title	Comment
108.6a	Effect of Engine Lubricating Oils on Ring-Sticking, Wear and the Accumulation of Deposits under High-Speed Supercharged Conditions	
108.7a	Effect of Engine Lubricating Oils on Ring-Sticking, Wear and the Accumulation of Deposits under High-Speed Supercharged Conditions	
108.8	Oxidation and Thermal Stability of Aircraft Engine Lubricating Oils	FTMS 3407.2 recommended as replacement
108.9	Low Temperature Dispersancy and Detergency Characteristics of Aircraft Engine Lubricating Oils	FTMS 347.3 recommended as replacement
109.1a	Oxidation Characteristics of Heavy Duty Crankcase Oils	
110.1a	Load-Carrying and Extreme-Pressure Characteristics of Gear Lubricants in Axles under Conditions of High-Speed and Shock Loading	
111.1a	Load-Carrying, Wear and Extreme-Pressure Characteristics of Gear Lubricants in Axles under Conditions of High-Speed Low-Torque Operation, Followed by Low-Speed High-Torque Operation	
112.1a	Moisture Corrosion Characteristics of Gear Lubricants	
113.1b	Storage Stability of Multipurpose Gear Lubricants	
117.2a	Oil Content (Acetone Extractable Material) of Molybdenum Disulphide Powder	
118.1	Removal of Rust Preventive by Marine Turbine Flushing Oil	
119.1	Moisture Removability of Marine Turbine Flushing Oil	
120.1	Homogeneity of Heavy-Duty Engine Oils	
121.2	Ethylene Glycol	
123.2	Particle Size of Colloidal Graphite	
125.1	Molybdenum Disulfide Content of Molybdenum Disulfide Powder	
125.2a	Molybdenum Disulfide Content of Molybdenum Disulfide Grease	
126.1	Thermal Oxidation Stability of Gear Lubricants	
129.1a	Acetone and Aldehydes in Alcohols	
130.1	Carbonizable Substances in Methanol	
131.1	Determination of Copper in Hydrocarbon Fuels	Replaced by IP 225
132.1b	Fuel System Icing Inhibitor in Aircraft Fuels	Replaced by IP 277 Method C
132.2	Fuel System Icing Inhibitor in Aircraft Fuels (Differential Refractometer Method)	

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