
Draft Jamaican Standard

Method of test

for

**Analysis of barium, calcium, magnesium, and zinc in unused
lubricating oils by atomic absorption spectrometry**



BUREAU OF STANDARDS JAMAICA

NON OBJECTION PERIOD: 21 April 2024 to 20 May 2024

Draft Jamaican Standard

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6 Winchester Road
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Kingston 10
Jamaica W.I.

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DJS ASTM D4628-23: 2024

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Bureau of Standards
Jamaica 6 Winchester Road
P.O. Box 113
Kingston 10
Jamaica, W.I.
Tel: (876) 926 -3140-5, (876) 632-4275 or (876) 618-1534
Fax: (876) 929 -4736
Website: www.bsj.org.jm
E-mail: info@bsj.org.jm

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Jamaican Standards establish requirements in relation to commodities, processes, and practices, but not purport to include all the necessary provisions of a contract.

The attention of those using this standard specification is called to the necessity of complying with any relevant legislation.

Amendments

No.	Date of Issue	Remarks	Entered by and date

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National Foreword

This standard is an adoption and is identical to **ASTM D4628: 2023** Analysis of barium, calcium, magnesium, and zinc in unused lubricating oils by atomic absorption spectrometry published by ASTM International.

Scope of the Standard

1.1 This test method is applicable for the determination of mass percent barium from 0.005 % to 1.0 %, calcium and magnesium from 0.002 % to 0.3 %, and zinc from 0.002 % to 0.2 % in lubricating oils.

1.2 Higher concentrations can be determined by appropriate dilution. Lower concentrations of metals such as barium, calcium, magnesium, and zinc at about 10 ppm level can also be determined by this test method. Use of this test method for the determination at these lower concentrations should be by agreement between the buyer and the seller.

1.3 Lubricating oils that contain viscosity index improvers may give low results when calibrations are performed using standards that do not contain viscosity index improvers.

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.5 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use. Specific warning statements are given in [4.1](#), [7.3](#), and [9.1](#).

1.6 This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Where the words 'International Standard' appear, referring to this standard, they should be read as 'Jamaican Standard'.

Where reference is made to informative and normative annexes the following definitions should be noted:

- Informative Annex – gives additional information intended to assist in the understanding or use of the document. They do not contain requirements.
- Normative Annex – gives provisions additional to those in the body of a document. They contain requirements.

Users should note that all standards undergo revision from time to time and that any reference made herein to any standard implies its latest edition, unless otherwise stated.

This standard is voluntary.

Acknowledgement

Acknowledgement is made to the ASTM International for permission to adopt **ASTM D4628: 2023**.