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**Committee D02 on Petroleum Products and Lubricants
Subcommittee D02.14 on Stability and Cleanliness of Liquid Fuels**

Research Report D02-1720

**Interlaboratory Study to Establish Precision Statements for
ASTM D7687-11, Standard Test Method for Measurement of
Cellular Adenosine Triphosphate in Fuel, Fuel/Water Mixtures,
and Fuel-Associated Water with Sample Concentration by
Filtration**

Technical contact:

Frederick Passman,
B C A Inc
3 Carlyle CT
PO Box 3659
Princeton, NJ 08543
US
fredp@ biodeterioration-control.com

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

1. Introduction:

Interlaboratory Study 367 was conducted to establish a precision statement for D7463-11, Method for Adenosine Triphosphate (ATP) Content of Microorganisms in Fuel, Fuel/Water Mixtures and Fuel Associated Water.

2. Test Method:

The Test Method used for this ILS is D7463-08. To obtain a copy of D7463, go to ASTM's website, www.astm.org, or contact ASTM Customer Service by phone at **610-832-9585** (8:30 a.m. - 4:30 p.m. Eastern U.S. Standard Time, Monday through Friday) or by email at service@astm.org.

3. Participating Laboratories:

The following laboratories participated in this interlaboratory study

1. Analyst 1
BCA, Inc.

2. Analyst 2
Confidential

4. Description of Samples:

There were 13 samples of varying targeted results used for this study. Each sample was prepared and distributed by Analyst 2 of Confidential. Below is a list of the samples, all prepared by the Confidential supplier:

1. 87E0
2. B-20
3. B-20 (2)
4. B-20 (3)
5. Diln 1-B20
 Provided by Analyst 2
6. Diln 1-ULSD
 Provided by Analyst 2
7. Diln 10-B20
 Provided by
8. Diln 10-ULSD
 Provided by Analyst 2
9. Diln 5-B20
 Provided by Analyst 2
10. Diln 5-ULSD
 Provided by Analyst 2

11. Diln 50-B20
 Provided by Analyst 2
12. Diln 50-ULSD
 Provided by Analyst 2
13. ULSD
 Provided by Analyst 2

5. Interlaboratory Study Instructions

Laboratory participants were emailed the test program instructions. For a copy of the instructions, please see Annex A.

6. Description of Equipment/Apparatus¹:

For information on the equipment/apparatus used by each laboratory, please see Annex B.

7. Data Report Forms:

Each laboratory was provided with a data report form for the collection of data. A copy of the data is provided in Annex C.

Please note: The laboratories have been randomly coded and cannot be identified herein.

8. Statistical Data Summary:

A summary of the statistics calculated from the data returned by the participating laboratories is provided in Annex C.

9. Precision and Bias Statement:

9.1 The precision of this test method is based on an interlaboratory study of WK12289, New Test Method for determining Adenosine Triphosphate (ATP) Concentration in Liquid Fuels and Fuel-Associated Water, conducted in 2008. Two laboratories participated in this study. Each of the two labs reported replicate test results for five materials for Fuel Phase ATP, and eight materials for Bottom Water ATP. Every “test result” reported represents an individual determination. Except for the use of only two laboratories, Practice E 691 was followed for the design and analysis of the data; the details are given in ASTM Research Report No. D02-1720.

9.1.1 *Repeatability limit (r)* - Two test results obtained within one laboratory shall be judged not equivalent if they differ by more than the

¹ The equipment listed was used to develop a precision statement for D7463-08. This listing is not an endorsement or certification by ASTM International.
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