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01 February 2019

**Committee D05 on Coal and Coke
Subcommittee D05.29 on Major Elements in Ash and Trace Elements of
Coal**

Research Report: D05-1054

**Interlaboratory Study to Establish Precision Statements for ASTM
D8247, Determination of Total Fluorine and Total Chlorine in Coal by
Oxidative Pyrohydrolytic Combustion Followed by Ion
Chromatography Detection**

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1. **Introduction:**

Interlaboratory Study 462 was conducted to establish a precision statement for D8247, Determination of Total Fluorine and Total Chlorine in Coal by Oxidative Pyrohydrolytic Combustion Followed by Ion Chromatography Detection. The data for this test method covers the determination of total fluorine and total chlorine in coal. Samples containing 10 mg/kg to 4000 mg/kg of the interested analyte can be analyzed directly.

2. **Test Method:**

The Test Method used for this ILS is ASTM D8247. To obtain a copy of [Standard Designation], 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:

**Consol Energy
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4. Description of Samples:

There were 12 samples of varying targeted results used for this study. Each sample was prepared and distributed by John Bullock of SGS Minerals. Below is a list of the samples with the corresponding supplier:

ILS Sample Number	Sample Type	Sample Origin
Sample-1	High Rank Coal	Unknown
Sample-2	High Rank Coal	SGS Delta from BC, Canada
Sample-3	High Rank Coal	Greenbriar Coal, WV, US
Sample-4	High Rank Coal	American Coal Company, Galatia, IL, US
Sample-5	High Rank Coal	American Coal Company, Galatia, IL, US
Sample-6	High Rank Coal	Brair Atnal Bowen, Australia
Sample-7	Low Rank Coal	SGS RoundUp, MT, US
Sample-8	High Rank Coal	Patriot Camp Terminal
Sample-9	High Rank Coal	Grand Eagle Patriot, Henderson Kentucky, US
Sample-10	High Rank Coal	Massay Marfork Bias Test Remains, WV, US
Sample-11	Low Rank Coal	High Eastern Region, SGS India
Sample-12	High Rank Coal	Henderson, Kentucky

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 D.

¹ The equipment listed was used to develop a precision statement for D8247. This listing is not an endorsement or certification by ASTM International.