

ASTM International Interlaboratory Study Program (ILS)



What is an ILS?

An interlaboratory study (ILS) is a multi-lab study done for the specific purpose of producing data that will be used to develop a Precision & Bias statement and Research Report in order to demonstrate the expected variability of a test method.

We'll discuss...



Who we are and what we do ...

- In 2004, the **Board of Directors** approved the creation of a unit that would help to strengthen the perceived quality of ASTM Test Methods by:
 - Facilitating the **production of data**, with the goal of developing Precision & Bias statements and Research Reports to demonstrate the **variability** of our test methods
 - Providing **administrative and financial support** to all ASTM committees
 - Helping to ensure the **confidentiality** of participating labs

**ASTM is not a lab.
We aren't able to test or receive samples.**

Form & Style Manual (Blue Book)

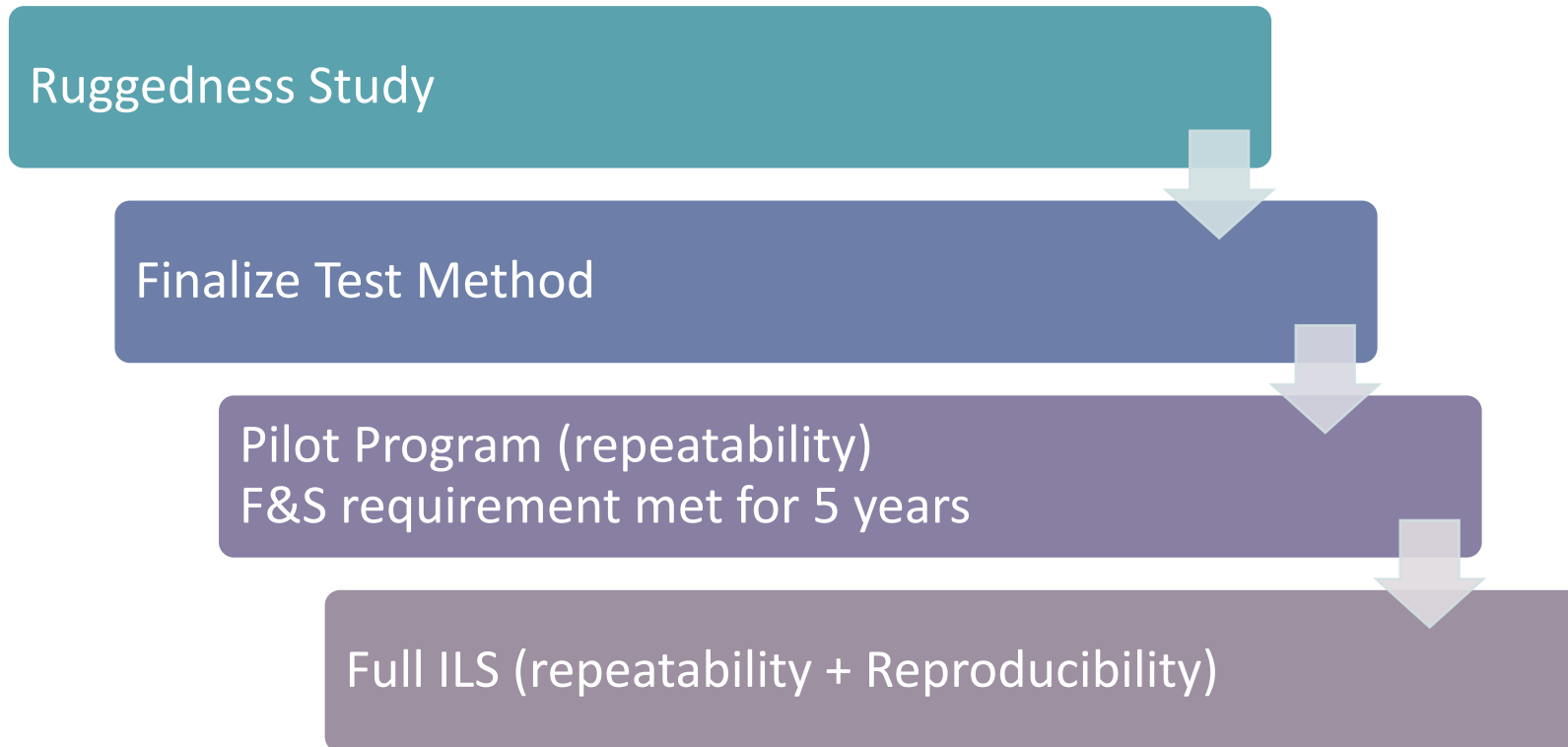
A21. Precision and Bias (**Mandatory**)

A21.2.1 A statement on precision allows potential users of the test method to assess in general terms its usefulness in proposed applications.

A21.2.3 **Every test method** shall contain:
(1) a statement regarding the **precision of test results** obtained in the same laboratory under specifically defined conditions of within-laboratory variability (**repeatability** conditions); and
(2) a statement regarding the precision of test results obtained in different laboratories (**reproducibility** conditions).



ILS Phases New Test Method





Test Result

- A test result should be uniquely defined by the Test Method- review your standard for specifics.
 - Single test determination
 - The average of two or more determinations
 - Subject to multiple if/then statements
- One **test result** = one reportable replicate for ILS purposes.
- A **test result** is the actual number you would report to a client.
- We will **need multiple test results (replicates)**, on each material, from every operator, in order to calculate precision.

Test Result *Example*

- Test Method X requires the **average of 5** individual measurements to be reported as a single test result (replicate). Your ILS calls for 3 replicates.
- A total of **15 individual measurements** must be taken to produce the 3 replicate test results (each the average of 5 measurements) required from each participating laboratory in this hypothetical.
- Laboratory Data Report Form

Hardness					
Individual Measurement 1	3	Individual Measurement 1	4	Individual Measurement 1	4
Individual Measurement 2	4	Individual Measurement 2	6	Individual Measurement 2	7
Individual Measurement 3	3	Individual Measurement 3	5	Individual Measurement 3	5
Individual Measurement 4	7	Individual Measurement 4	3	Individual Measurement 4	4
Individual Measurement 5	5	Individual Measurement 5	6	Individual Measurement 5	5
Average:	4.4	Average:	4.8	Average:	5

3 Replicate Test Results



Nonquantitative Test Results

- An ILS is **not** required
- Examples: pass fail tests, rating scale, color change ...

From ***Form and Style***:

A21. Precision and Bias (Mandatory)

*A21.5.4 When a test method specifies that a test result is a **nonnumerical** report of success or failure or other categorization or classification based on criteria specified in the procedure, use a statement on precision and bias such as the following:*

Precision and Bias—No information is presented about either the precision or bias of Test Method X0000 for measuring (insert here the name of the property) since the test result is nonquantitative.

For pilling:

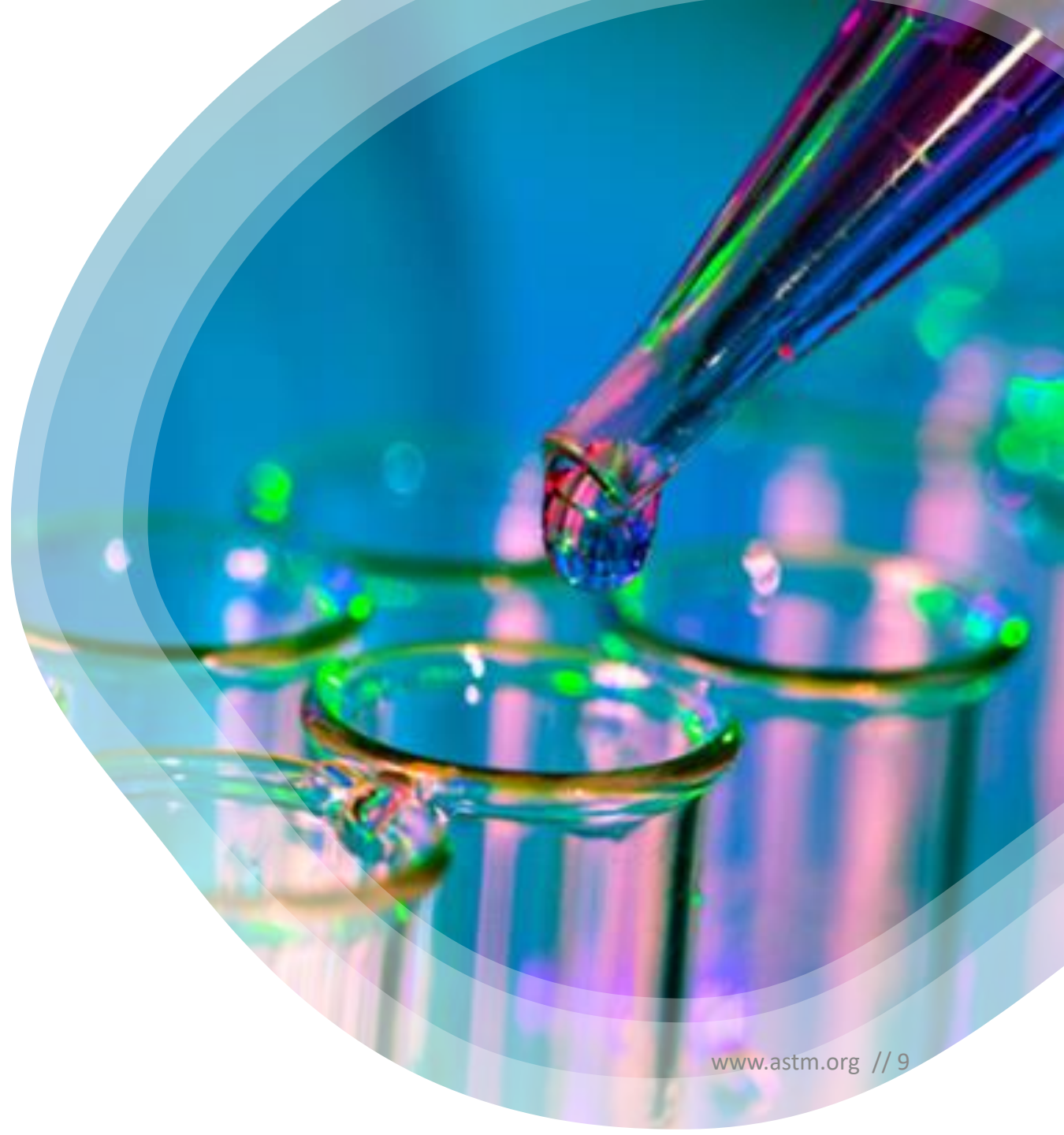
- 5—no pilling
- 4—slight pilling
- 3—moderate pilling
- 2—severe pilling
- 1—very severe pilling

For fuzzing:

- 5—no fuzzing
- 4—slight fuzzing
- 3—moderate fuzzing
- 2—severe fuzzing
- 1—very severe fuzzing

Administrative Support

- Scheduling of conference calls and WebEx meetings
- Review of Experimental Design
- Assistance identifying volunteer laboratories
- Identification of sample vendors
- Coordination of sample distribution
- Data collection
- Statistical processing
- Generation of reports
- Assistance with the adjudication of negative votes





Strengths

- Input encouraged from active Committee volunteers, as well as non-members, broadening the range and diversity of the study participants, allowing the study to most accurately demonstrate expected “real-world” precision
- Scientific neutrality of ASTM in reviewing test data (random lab numbers are assigned to all of the participants)
- Provides a value-added Quality Assurance Program to participating laboratories



Potential Lab Benefit of Participation

- Statistical program to monitor strengths and weaknesses of lab testing when compared to peers
- Assess testing performance and adherence to written procedures by lab technicians
- Recognition in the final Research Report



Benefits to the Committees

- Meet the requirements of the Form and Style Manual
- Obtain valuable feedback on methods, leading to the correction of errors and omissions, as well as highlighting the need for technical updates
- Resource for increased membership



“I think there was a typo
in the lab instructions.”

Blind Sample Matrix

- To generate, the ILS Staff must have:
 - Laboratory Names
 - Material Names
 - Number of Replicates
- Sample Labeling Matrix below was sent to the distributor by the ILS Staff
- Utilized by Committees D02, D16, D19 & D28

Sample Name/ Lab Name:	University of Calgary	Marathon Oil	Alberta Research Council	Phillips 66 OK	LyondellBase II	ExxonMobil Research	Agilent Technologies	Triton Analytics Corp	Envantage Inc.
Kerosene	1, 7	2, 12	5, 6	7, 9	4, 6	4, 7	2, 5	8, 11	7, 10
High Sulfur Diesel	3, 6	3, 10	9, 10	5, 10	2, 11	5, 10	9, 12	1, 4	2, 6
#2 Low Sulfur Diesel	5, 12	5, 11	4, 11	3, 11	8, 9	11, 12	1, 10	6, 10	4, 11
Aviation Turbine Jet A	2, 4	4, 6	2, 8	1, 6	3, 10	2, 8	3, 4	2, 9	5, 9
Ultra Low Sulfur Diesel	8, 11	7, 9	3, 7	2, 4	5, 7	1, 6	6, 11	3, 12	1, 3
Light Cycle Oil	9, 10	1, 8	1, 12	8, 12	1, 12	3, 9	7, 8	5, 7	8, 12



Data Report Form- Instructions



ILS# 1446

**ASTM F3203 - Test Method for Determination of Gel Content of Crosslinked Polyethylene (PEX)
Pipes and Tubing**

Basic Study Information:

Please have one Laboratory Technician conduct all ILS testing.

Please follow ASTM standard provided to you for this study.

Please complete the testing in the shortest possible period of time.

Data Entry:

Do not enter commas (1,234 --> 1234)

Do not report units

Submitting Data:

Please submit completed data report forms to ILS@astm.org

Laboratory understands and agrees that the data generated as a result of the services and provided to ASTM will be used in ASTM's business, to assist in developing a research report, consensus standard or adjunct thereto. Laboratory agrees to keep such data and results confidential and not to disclose or share the data/results with anyone else, without ASTM's written consent.

[Click here for a copy of the ASTM International's Intellectual Property Policy.](#)



Data Report Form



ILS#1446

F3203, Standard Test Method for Determination of Gel Content of Crosslinked Polyethylene (PEX) Pipes and Tubing

Laboratory Name:

Laboratory Technician:

Date:

Please submit completed data report forms to ILS@astm.org

Measured % Gel Content

Material X

Material X-1

Material X-2

Material X-3

Replicate 1

Replicate 2

Replicate 3

Measured % Gel Content

Material Y

Material Y-1

Material Y-2

Material Y-3

Replicate 1

Replicate 2

Replicate 3

Measured % Gel Content

Material Z

Material Z-1

Material Z-2

Material Z-3

Replicate 1

Replicate 2

Replicate 3

Comments:

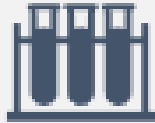
Laboratory understands and agrees that the data generated as a result of the services and provided to ASTM will be used in ASTM's business, to assist in developing a research report, consensus standard or adjunct thereto. Laboratory agrees to keep such data and results confidential and not to disclose or share the data/results with anyone else, without ASTM's written consent.

Administering Programs

- Conference Calls and WebEx Meetings with the participants to discuss specific study instructions
- Coordination of acquisition and distribution of study material
 - Physical
 - Electronic
- Collection of data report forms & analysis of data
- Assist with the adjudication of negative votes



Precision



To calculate precision, we need usable data from at **least 6 laboratories**
(The closer to 30, the better)

Each lab should report **2-10 replicate** test results per material



The precision statement in an ASTM test method is not meant to qualify it as good or bad



Example:
% Moisture in mulch vs.
aspirin

The published precision is there to help a user of the standard understand what can be expected based on the real world results of others

Repeatability (r) ranges

- With 95% confidence, the same operator, in the same laboratory, using the same equipment, under the same conditions, should obtain results when testing the same material that agree within this range.
- **Example:** published repeatability range = 2.4 ppm
Test Result 1: 79.1 ppm
Test Result 2: 81.6 ppm

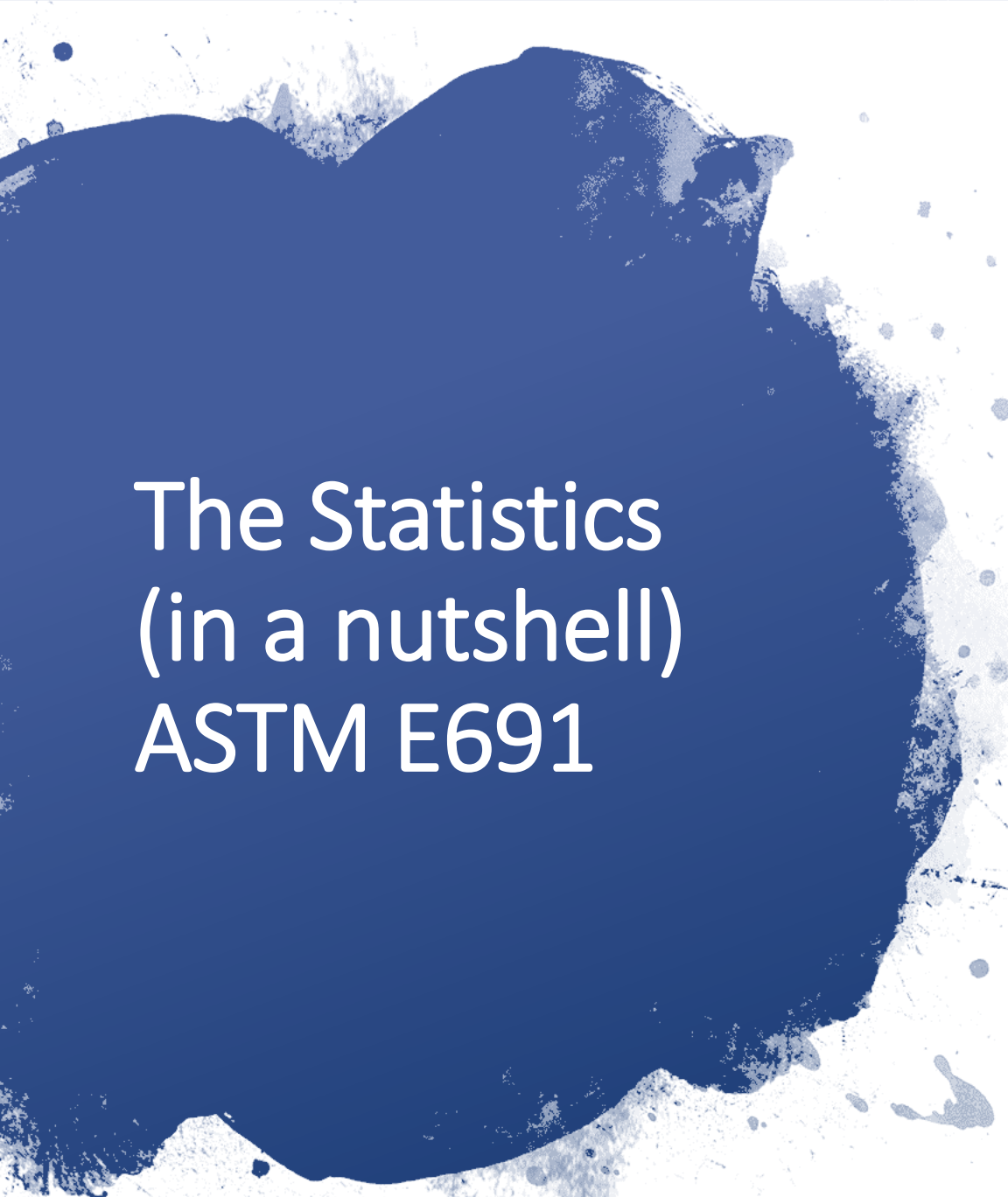
Results differ by 2.5 ppm, therefore: **Suspect**

*Internal laboratory investigation may be advisable

Reproducibility (R) ranges

- With 95% confidence, two operators, in different laboratories, using different equipment, under conditions meeting those specified in the standard, should obtain results when testing **the same material** that agree within this range.
- **Example:** published reproducibility range = 3.2 ppb
 - Test Result from Lab 1: 50.8 ppb
 - Test Result from Lab 2: 47.9 ppb

Results differ by 2.9 ppb, therefore: **As Expected**



The Statistics (in a nutshell) ASTM E691

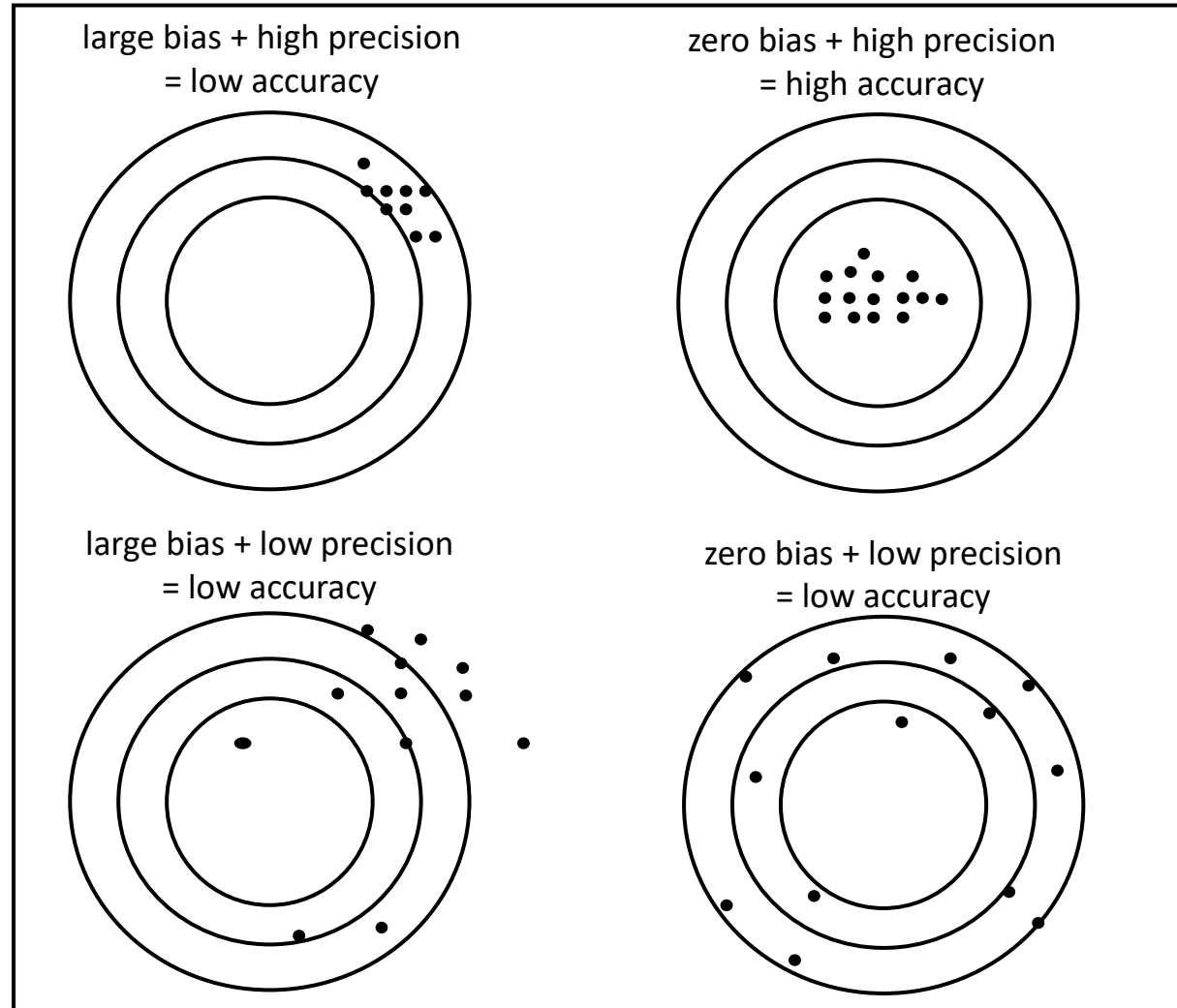
- E691 is useful for estimating the precision of different materials, at varying levels, with a repeatability and reproducibility range being calculated for each.
 - Usually 3-7 different materials span the range stated in the Scope of the standard
- Within laboratory precision is evaluated against a **k-statistic**.
 - Variability among replicates in any one lab
- Between laboratory precision is evaluated against an **h-statistic**.
 - Lab averages compared between all participants

Bias

- To calculate bias, we may be able to include a reference “standard” among the sample specimens distributed to the participating laboratories.
- Bias may be determined as the average discrepancy between the “known” value and the reported values.



Precision and Bias



Remember ...

- Your standard may allow you to correct for bias.
- You cannot correct for imprecision.
- An ILS may be used to demonstrate improvement as standards are modified.
 - For example: Compare results from Method A with those from Method B
- Whatever materials we are testing, they should be as homogeneous as possible (i.e. from the same batch and lot).



Establishing New Programs

- Concept registered as a **Work Item**
- Program registered through **MyASTM** as an ILS Program
- Initial conference call, with the technical contact from the committee, to establish the **basic study parameters**
- Experimental design (with input from the committee's **statistical support** person, if available)
- Identification of study materials, suppliers, a distributor, and volunteer laboratories





Committee Week Reports



ILS# 0018 Committee Week Status Report

D3942, Test Method for Determination of the Unit Cell Dimension of a Faujasite-Type Zeolite

June 9, 2017

Subcommittee: D32.05

Technical Contact: Thomas Szymanski

Staff Manager: Kelly Paul

Work Item Number: WK29961

Registered Date: April 26, 2006

Statistical Support: THOMAS SZYMANSKI

Tests:

1. Relative Crystallinity %

Materials:

1. D32-08-002
2. Standard - Supplied by: Acme
3. D32-08-004 - Supplied by: Acme
4. D32-08-003 - Supplied by: Acme

Labs:

Lab Name	Contact Name		Data Submitted
Albemarle Bayport	Mark	James	✓
Chevron	James	Oliver	✓
Haldor Topsøe A/S	Shawn	Beegle	✓
INEOS	Joe	Little	✓
Lummus Technology Inc-TL-I	Diane	Williams	✓
Saint Gobain Norpro	Jacki	Cullen	✓
UOP	Terri	Ross	✓

From: ils@astm.org
 Sent:
 To: Technical Contact
 Cc: Staff Manager, Sub Chair
 Subject: ILS# 0458 - Committee Week Status Report

Dear Larry,

Please see the attached Committee Week Status Report for ILS# 0458, on ASTM - D0664- Test Method for Acid Number of Petroleum Products by Potentiometric Titration, for your upcoming Committee Week Meeting. This summary is to assist you in providing an update to your committee. Please review and let us know if any changes need to be made.

For your reference, attached are the following files:

P-and-B-Statement-For-ILS-0458.doc

Regards,

The ILS Staff
ILS@astm.org

W.R.Grace & Co	Jen	Smith	✓
----------------	-----	-------	---

Distributor:

Acme

Status: Precision statement on main ballot.

Please email any missing information regarding this interlaboratory Study to ILS@astm.org. ASTM will need all of the study information to complete the research report.

Research Reports

- The ASTM Form and Style Manual (Section A29.1) states,
 - *"Where numerical data have been generated to establish the precision and bias of a test method, a research report is required."*
- ASTM Word Research Report Template
- The draft research report should be made available to committee members while the related precision statement is on ballot.
- Research report numbers are assigned after ballot approved.



Parts of a Research Report

- List of participating laboratories
- Description of samples with their suppliers
- Laboratory instructions
- General description of equipment/apparatus used
- Raw data (lab name's hidden)
- Statistical summary
- Precision and bias statement

This Research Report is issued under the fixed designation RR[RR#]. You agree not to reproduce or circulate or quote, in whole or part, this document outside of ASTM International Committee Society activities, or submit it to any other organization or standards body (whether national, international or other) except with the approval of the Chairman of the Committee having jurisdiction and the written authorization of the President of the Society. If you do not agree to these conditions, please immediately destroy all copies of this document. Copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. All rights reserved.

[Date RR # approved – ASTM to assign]

Committee [Committee] on [Committee Title]
Subcommittee [Subcommittee Number] on [Subcommittee Title]

Research Report [RR # – ASTM to assign]

Interlaboratory Study to Establish Precision Statements for ASTM
[Standard Designation Number], [Standard Title]

Technical contact:

[Technical Contact Title] [Technical Contact First Name]
[Technical Contact Last Name],
[Technical Contact Company]
[Technical Contact City], [Technical Contact State] [Technical Contact Zip]
[Technical Contact Country]
[Technical contact phone]
[Technical contact email]

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

Research Report Numbers

- A research report number will be assigned by ASTM when all of the following have been completed:
 - The research report is submitted to ILS
 - It has been reviewed for completeness
 - The ballot item to include the corresponding precision and bias statement is approved for publication

Select: Register a New ILS Study

Interlaboratory Study Program

ASTM's Board of Directors adopted plans, in the fall of 2004, to launch the Interlaboratory Study Program (ILS) as part of their continuing pursuit of excellence in standards development. Responding to the need for standards in the marketplace to be of known and documented quality, a commitment was made to fund the development of the ILS Program. This commitment means that ASTM has been able to assist those technical committees for which the prospect of implementing an interlaboratory study was either administratively daunting or financially impossible. The ultimate goal is to enhance the quality of ASTM standard test methods by aiding the Technical Committees as they develop Precision Statements backed by high quality laboratory data.

In order to support the committees in their efforts to produce precision statements for their test methods, so as to incorporate at least a repeatability statement, the ILS Program is available to assist with the following areas:

- Designing an Interlaboratory Study
- Identifying potential samples
- Soliciting volunteer laboratories
- Finding an available supplier
- Contracting with a distributor
- Reviewing laboratory instructions
- Reimbursing shipping expenses
- Collecting data
- Analyzing data
- Producing a draft precision statement
- Compiling information for the Research Report
- Recognition of participating labs

Once a Work Item has been registered ([instructions here](#)), new programs should be registered through the Interlaboratory Study (ILS) link in the My Tools section of the member's MyASTM page, available after logging into ASTM's website.



Infographic: Interlaboratory Studies Program

[Active ILS Programs](#) ↓

[ILS Process](#)

[Precision and Bias](#)

[Research Reports](#)

[FAQ](#)

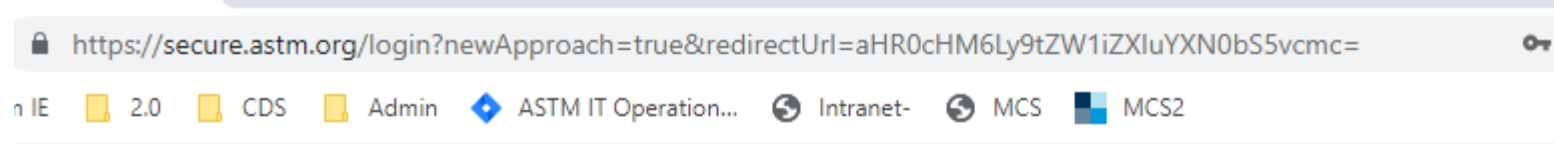
www.astm.org/ILS

Interlaboratory Study (ILS) Process

1. **Work Item** - register a work item (if you have not done so already).
2. **Registration** - register the ILS through the MyASTM area of the website.
3. **Conference Call** - The Technical Contact (TC) will be contacted by ASTM to set up a conference call to discuss the ILS. During this call the TC should be prepared to discuss the following information: test specimens, lab supplies, potential suppliers, a distributor, a potential list of labs, and what data should be collected as part of the study.
4. **Samples** - if assistance is needed with finding and/or ordering materials to be tested, ASTM can provide support.
5. **Sample Funding** - ASTM has funds available to assist with purchasing samples, sample preparation and shipping. After a proposal of costs is developed, ASTM will work with the committee to determine how much assistance can be provided.
6. **Lab Solicitation** - if there are not enough labs to do the testing, ASTM can send out a solicitation to the committee looking for volunteers.
7. **Lab Instructions** - the study instructions should be developed and finalized before samples are distributed. Please send them to ASTM for review.
8. **Data Report Forms** - ASTM will collect the study data using an online data report form or an excel data report form (depending on the amount/complexity of the data). The data report form will be sent to the technical contact for review before the labs receive it.
9. **Sample Distribution** - once the study materials have been purchased, it may be necessary to send them to a distributor for final prep and packaging (may be the same as the supplier). The distributor will then ship the samples. ASTM will send the data report forms and the study instructions to the labs.
10. **Data Submission** - ASTM will track data submitted by the lab participants.
11. **Statistical Summary** - once all of the data has been received from the labs, ASTM will then compute the repeatability and reproducibility using ASTM Statistical Software. A draft precision and bias statement will be written and sent to the TC for review.



MyASTM Login



Sign In

Username

Password

[Forgot Password?](#)

[Contact Support](#)



Register a New Study

[MyASTM](#)

[ILS Home](#)

[ASTM.org](#)

[Register or Edit a Study](#)

[Need Help?](#)

The ILS Staff can help you finish your registration.

email: ILS@astm.org

tel: +1.610.832.9746

Interlaboratory Study Registration

[REGISTER A NEW STUDY](#)

Technical contact understands and agrees that the data generated as a result of this study, regardless of any further support or services provided by or to ASTM, will be used in ASTM's business, to assist in developing a research report, consensus standard or adjunct thereto. Technical contact agrees to keep such data and results confidential and not to disclose or share the data/results with anyone else, without ASTM's written consent. For a copy of the ASTM International's Intellectual Property Policy [click here](#).

Committee

Interlaboratory Study Registration

Your ILS Number: 0375



* Indicates a required field.

* Sponsoring Committee

D05 - Coal and Coke

* Sponsoring Subcommittee

D05.21.00 - Methods of Analysis

CONTINUE

Standard

Interlaboratory Study Registration

Your ILS Number: 0375



* Indicates a required field.

* Does this program relate to an existing ASTM standard?

- Yes
 No

* ASTM Standard

Standard Title

Work Item ⓘ

Continue

Contacts

Interlaboratory Study Registration

Your ILS Number: 0375



Technical Contact

First Name	Last Name	Email
Melissa	Marcinowski	mmarcinowski@astm.org

Statistical Support

Please indicate the person who will provide statistical support for this ILS, or indicate below that assistance is required.

- ASTM to assist with statistical support.
- I will provide statistical support for this ILS.
- A committee member will provide statistical support.

Select One ▾

- Statistical support will be provided by the following person:

Continue

Tests

Interlaboratory Study Registration

Your ILS Number: 0375



Tests can be re-ordered by clicking and dragging the numbers, or by using the up/down arrow buttons.

Tests ⓘ	Units of Measure ⓘ	
1.) <input type="text" value="Day 1 Air- EqM- Pre-Wet"/>	<input type="text"/>	<input type="button" value="Remove"/>
2.) <input type="text" value="Day 1 Air- EqM- Not Pre-Wet"/>	<input type="text"/>	<input type="button" value="Remove"/>
3.) <input type="text" value="Day 2 Air- EqM- Pre-Wet"/>	<input type="text"/>	<input type="button" value="Remove"/>
4.) <input type="text" value="Day 2 Air- EqM- Not Pre-Wet"/>	<input type="text"/>	<input type="button" value="Remove"/>
5.) <input type="text" value="Day 1 Nitrogen- EqM- Pre-Wet"/>	<input type="text"/>	<input type="button" value="Remove"/>
6.) <input type="text" value="Day 1 Nitrogen- EqM- Not Pre-Wet"/>	<input type="text"/>	<input type="button" value="Remove"/>
7.) <input type="text" value="Day 2 Nitrogen- EqM- Pre-Wet"/>	<input type="text"/>	<input type="button" value="Remove"/>



Materials, Supplier(s) & Distributor(s)

Interlaboratory Study Registration

Your ILS Number: 0375



Material (sample) ⓘ

Material Supplier (company name) ⓘ

Supplier Contact First Name

Supplier Contact Last Name

Supplier Email

The distributor is the same as the supplier.

Material Distributor (company name) ⓘ

Distributor Contact First Name

Distributor Contact Last Name










Distributor Email

CANCEL

SAVE

Materials

Materials can be re-ordered by clicking and dragging the numbers, or by using the up/down arrow buttons.

	Testing Material (sample) ⓘ	Material Supplier ⓘ	Distributor ⓘ		
1.)	 CO-Bituminous	Colorado, USA	Standard Laboratories, Inc.	Edit	Remove
2.)	 PA-Bituminous	Pennsylvania, USA	Standard Laboratories, Inc.	Edit	Remove
3.)	 VA-Bituminous	Virginia, USA	Standard Laboratories, Inc.	Edit	Remove
4.)	 MT-Subbituminous B	Montana, USA	Standard Laboratories, Inc.	Edit	Remove
5.)	 WY-Subbituminous I	Wyoming, USA	Standard Laboratories, Inc.	Edit	Remove
6.)	 WY-Subbituminous	Wyoming, USA	Standard Laboratories, Inc.	Edit	Remove
7.)	 MS-Lignite	Mississippi, USA	Standard Laboratories, Inc.	Edit	Remove
8.)	 ND-Lignite	North Dakota, USA	Standard Laboratories, Inc.	Edit	Remove
9.)	 TX-Lignite II	Texas, USA	Standard Laboratories, Inc.	Edit	Remove

[Add Material](#)

[Continue](#)



Laboratories



Download Lab Contact Information Form (Excel)

ADD LABS

Please fill in the Lab Contact Information form and email it back to lls@astm.org

Laboratory ⓘ	Edit	Remove
DONG Energy	Edit	Remove
SGS Newcastle	Edit	Remove
ALS Coal Division GV	Edit	Remove
ALS Coal Division GD	Edit	Remove
BHP Billiton Mitsubishi Alliance	Edit	Remove
Standard Laboratories, Inc. CY	Edit	Remove
Standard Laboratories, Inc. RW	Edit	Remove

Mineral Labs, Inc.	Edit	Remove
SGS North America Inc.	Edit	Remove
SGS Henderson KY US	Edit	Remove
Standard Laboratories, Inc. AS	Edit	Remove
SGS China Tianjin Energy Lab	Edit	Remove
SGS - Tianjin China	Edit	Remove
WY Analytical Laboratories, Inc	Edit	Remove
Incolab Services Colombia S.A.S.	Edit	Remove
BVIT Newcastle	Edit	Remove
		Add Another Lab
		Continue



Laboratory Information Form



ASTM INTERNATIONAL
Helping our world work better

ILS # 0375

Lab Info Form

[Click here to email this completed lab info form to: ils@astm.org](mailto:ils@astm.org)

Laboratory Name	Contact First Name	Contact Last Name	Email	Phone #	Address 1	Address 2	City	State (Full name)	Zip Code	Country (Full name)

Registration Summary – Submit to ASTM



Please review the following summary of your ILS program before submitting to ASTM.

PRINT FRIENDLY



Materials

SUBMIT REGISTRATION TO ASTM

Select to Edit

Committee

Committee	D05 - Coal and Coke	
Sub Committee	D05.21.00 - Methods of Analysis	

Standard

Related Standard	D1857_D1857M - Test Method for Fusibility of Coal and Coke Ash	
ILS Title	Test Method for Fusibility of Coal and Coke Ash	
Work Item	WK68672	

Contacts

Technical Contact		
First Name	Last Name	Email
Melissa	Marcinowski	mmarcinowski@astm.org

Tests

Tests	Units of Measure
Day 1 Air- EqM- Pre-Wet	
Day 1 Air- EqM- Not Pre-Wet	
Day 2 Air- EqM- Pre-Wet	
Day 2 Air- EqM- Not Pre-Wet	
Day 1 Nitrogen- EqM- Pre-Wet	
Day 1 Nitrogen- EqM- Not Pre-Wet	
Day 2 Nitrogen- EqM- Pre-Wet	
Day 2 Nitrogen- EqM- Not Pre-Wet	

Testing Material (sample)	Material Supplier	Distributor
CO-Bituminous	Colorado, USA	Standard Laboratories, Inc.
PA-Bituminous	Pennsylvania, USA	Standard Laboratories, Inc.
VA-Bituminous	Virginia, USA	Standard Laboratories, Inc.
MT-Subbituminous B	Montana, USA	Standard Laboratories, Inc.
WY-Subbituminous I	Wyoming, USA	Standard Laboratories, Inc.
WY-Subbituminous	Wyoming, USA	Standard Laboratories, Inc.
MS-Lignite	Mississippi, USA	Standard Laboratories, Inc.
ND-Lignite	North Dakota, USA	Standard Laboratories, Inc.
TX-Lignite II	Texas, USA	Standard Laboratories, Inc.



Labs

Laboratory
DONG Energy
SGS Newcastle
ALS I Coal Division GV
ALS I Coal Division GD
BHP Billiton Mitsubishi Alliance
Standard Laboratories, Inc. CY
Standard Laboratories, Inc. RW
Standard Laboratories, Inc. ES
Mineral Labs, Inc.
SGS North America Inc.
SGS Henderson KY US
Standard Laboratories, Inc. AS
SGS China TianJin Energy Lab
SGS - TianJin China
WY Analytical Laboratories, Inc
Incolab Services Colombia S.A.S.
BVIT Newcastle

PRINT FRIENDLY

Technical contact understands and agrees that the data generated as a result of this study, regardless of any further support or services provided by or to ASTM, will be used in ASTM's business, to assist in developing a research report, consensus standard or adjunct thereto. Technical contact agrees to keep such data and results confidential and not to disclose or share the data/results with anyone else, without ASTM's written consent. For a copy of the ASTM International's Intellectual Property Policy click [here](#).

SUBMIT REGISTRATION TO ASTM

Key Takeaways

- In each participating laboratory, **one lab technician** should conduct **all ILS testing**
- Labs should follow the ASTM standard provided to them for the ILS, completing the testing in the **shortest** possible period of time
- Full ILS - we need good usable data from a **minimum of 6** labs
- Do not send samples to **ASTM Headquarters**

The ILS Program is a **FREE** member benefit, available to all committees, for members working on ASTM Test Methods.



Questions



Contact Information

Phillip Godorov,
Director
610-832-9715
pgodorov@astm.org

Caitlin Farrell,
Project Manager
610-832-9746
cfarrell@astm.org

Interlaboratory Study
Program (ILS)

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

ILS@astm.org