
**Laboratory Approval Program
Application for Method 4.1 Sampling
and Analysis
Moisture Content of Sources**

Laboratory Approval Program Application for Method 4.1 Sampling and Analysis Moisture Content of Sources

This approval applies to sampling, analysis, calculation and reporting of moisture content in stack gases by Method 4.1. It is a prerequisite for Method 100.1 and is also offered as a standalone approval for test firms that wish to determine only source moisture. Test firms that intend to perform moisture gain as part of Isokinetic Traverse Sampling should use that application instead to avoid duplication of effort. Please complete this form if you wish your test facility to be evaluated for the above method. Check the appropriate boxes or write NA if an item is not applicable.

FOR SCAQMD USE ONLY
LAP Code Number: _____
Application received: _____
Review started: _____
Letter sent: _____
Findings: _____
Approval/Denial: _____
Issuance Date: _____
Remarks: _____

COMPANY INFORMATION

LEGAL NAME AND FULL ADDRESS of the testing laboratory. This name will be used for all correspondences with the testing laboratory.

Laboratory Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone No. _____ Fax No. _____

Scope of Application

In order to be approved for Moisture Determination you must also be approved for Protocol Preparation, Traverse Point Determination and Volumetric Flow Rate, and Dry Gas Density determination. Are you already approved or are you applying concurrently for these approvals?

Which Method do you want to be evaluated for? Check all that apply

- Method 4.1
- Method 4.1 approved equivalent

Which tasks will you perform? (Check all that apply)

- protocol preparation
- train preparation
- field sampling
- moisture gain
- engineering calculations and final report

Do you plan to subcontract any of the above tasks? If so, please describe the task, subcontractor and LAP status _____

Personnel

Complete Table I by filling in the information pertaining to your staff and their experience. Please show who is the report signatory, who supervises the work, and who prepares sampling trains, field sampling, sample recovery/ analysis, equipment calibration, and report preparation. (This may be one person)

TABLE I: EDUCATION AND EXPERIENCE OF PERSONNEL

Individual's Name and Degree	Position or Title	Years of Source Testing Experience	Approximate Number of Traverse and velocities Supervised/Performed in the Last -		Individual Will Perform Following Test Method/ Measurements in Proposed Work
			12 Months	3 Months	

NOTE: If more than one person may perform a specific procedure, or you are not able at this time to specify the personnel most likely to be sent to the test site, please describe the qualifications of all personnel who might be sent.

Methods

LAP *requires* the following improvements in the performance of Method 4.1
 MINIMUM condensate
 MINIMUM / MAXIMUM sampling time

LAP *recommends* the following improvements in the performance of Method 4.1
 Gravimetric analysis is recommended.

LAP *allows* the following improvements in the performance of Method 4.1
 ADDITION OF MULTIPLE extra impingers

Please attach the following information.

att'd none

- A current copy of any method descriptions or instructions (SOPs, flow charts, procedures etc.) that your test facility uses in reference to the above techniques.
- Any modifications of the above method.
- Any limitations on your performance of the above method (Limitations may be by source, stack velocity, temperature etc.).
- Copy of equivalent method, date and SCAQMD contact, if applicable.

Documentation checklist

Please attach de-identified actual or “dummy” copies of these documents:

att'd none

- Method 4.1 report
- Method 4.1 calculations (spreadsheet printouts or hand calculations etc.)
- handwritten raw data (field data, train preparation, moisture gain etc.)
- supporting data (equipment calibration data etc.)
- chain of custody and analysis request (if sampling equipment changes hands)

Does the *final report* include:

yes no

- name and location of your test facility
- report identification (tracking number)
- client name and location
- source name and location (if different from client)
- process description
- dimensioned diagram of stack, port(s) and flow disturbances
- purpose of test
- method used and work performed
- diagram of sampling equipment
- sampling point(s)
- test date and time
- results and units
- deviations, observations, or exclusions from test method or original protocol

- quality control results
- copies of raw data (required for reports submitted to SCAQMD)
- signature and date

Does the *train preparation data* include

- preparation area
- DI water quality
- initial liquid volumes and/ or impinger weights
- balance ID and reference to balance calibration data
- preparer signature and date
- chain of custody for outgoing trains (if equipment changes hands)

Does the *field data* include:

- gas velocity data* (refer to LAP Approval for Traverse Point and Volumetric Flow)
- sampling pump ID
- dry gas meter ID and calibration reference
- sampling train ID
- sampling time, gas volume, meter temperature, orifice pressure readings
- sampling equipment leak check results
- personnel signature and date

Does the *moisture gain data* include

- chain of custody for incoming samples and analysis request form (if samples change hands)
- observations of train integrity, silica gel expended, unusual conditions
- final weights or volumes
- analyst signature and date
- moisture gain and percent moisture calculations

Does the *supporting data* include

- balance and dry gas meter calibration data?

QA checklist

att'd none

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Please indicate how and by whom problems that affect accuracy and reproducibility (wrong technique or time, equipment leaks, calculation errors etc.) are detected, annotated and corrected. |
| <input type="checkbox"/> | <input type="checkbox"/> | Please attach information on any internal audits, and any related audits, accreditations, approvals or certifications |
| yes | no | |
| <input type="checkbox"/> | <input type="checkbox"/> | Is the report signatory as designated on the application? |
| <input type="checkbox"/> | <input type="checkbox"/> | Is equipment calibrated according to the method? |
| <input type="checkbox"/> | <input type="checkbox"/> | Are standards appropriate for equipment range and traceable to NIST? |
| <input type="checkbox"/> | <input type="checkbox"/> | Is data kept in hardcopy for each test, even if stored in PC or on disk? |
| <input type="checkbox"/> | <input type="checkbox"/> | Are there clear criteria for samples, sampling, or equipment not meeting QC? |
| <input type="checkbox"/> | <input type="checkbox"/> | If samples, sampling, or equipment fails to meet criteria, is there a corrective action? |
| <input type="checkbox"/> | <input type="checkbox"/> | Is COC unbroken (if equipment changes hands between field and lab personnel)? |
| <input type="checkbox"/> | <input type="checkbox"/> | Is there version control on submitted documents including data, formats, reports, methods and SOPs? |

Physical requirements checklist

- | | | |
|--------------------------|--------------------------|---|
| yes | no | |
| <input type="checkbox"/> | <input type="checkbox"/> | Are all areas where this method will be performed secure? (includes main facility, mobile labs, equipment storage, sample storage, hardcopy storage and report preparation areas) |
| <input type="checkbox"/> | <input type="checkbox"/> | Do you have hot and cold tap water, sink and a drain for thorough glassware cleaning? |
| <input type="checkbox"/> | <input type="checkbox"/> | Does DI water meet ASTM Type III? |

Please describe the DI source _____

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Is DI quantity sufficient for glassware rinsing and train preparation? |
|--------------------------|--------------------------|--|

-
- Are balance areas level and free from vibration, drafts etc?
 - Is there storage area for clean glassware that protects it from dust?
 - Are procedures, SOPs etc. conveniently available to personnel?
 - Are dry gas meter and balance manuals and logbooks conveniently available to personnel?

Do you have the following items? Please list the make, models and serials numbers of instruments/ equipment that you will use to perform these methods. If you do not have the item or reagent listed, but you have an equivalent, please describe your item or reagent.

- impingers, connectors
How many sets? _____

- several 6 ft, 8 ft and 10 ft glass or quartz probes or probe liners
How many? _____

- Do you use flexible tubing?
If so, what kind? _____
- impinger balance to 0.5 g or better _____
- indicating silica gel _____
- Is the glassware clean? (Is it free from residue and does it sheet water?)

The above information is true to the best of my knowledge and belief

Signature, authorized contact

Date

Attach this application to the LAP General Application and submit to :

**The Laboratory Approval Program Coordinator
Monitoring and Analysis
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, California, 91765-4182
Phone: (909) 396-2228
Fax: (909) 396-2099**