Thank You

for choosing the AirCheck✔Kit™

We appreciate your business and look forward to a long lasting relationship with you. We're here to help, so don't hesitate to contact us with your air related questions.

800-247-1024	(U.S. & Canada only)
512-263-0000	Customer Service, ext 72
512-263-0002	Fax
E-mail Address:	Service@AirCheckLab.com
Website Address:	www.AirCheckLab.com
Mailing Address:	Trace Analytics, Inc. 15768 Hamilton Pool Rd. Austin, TX 78738

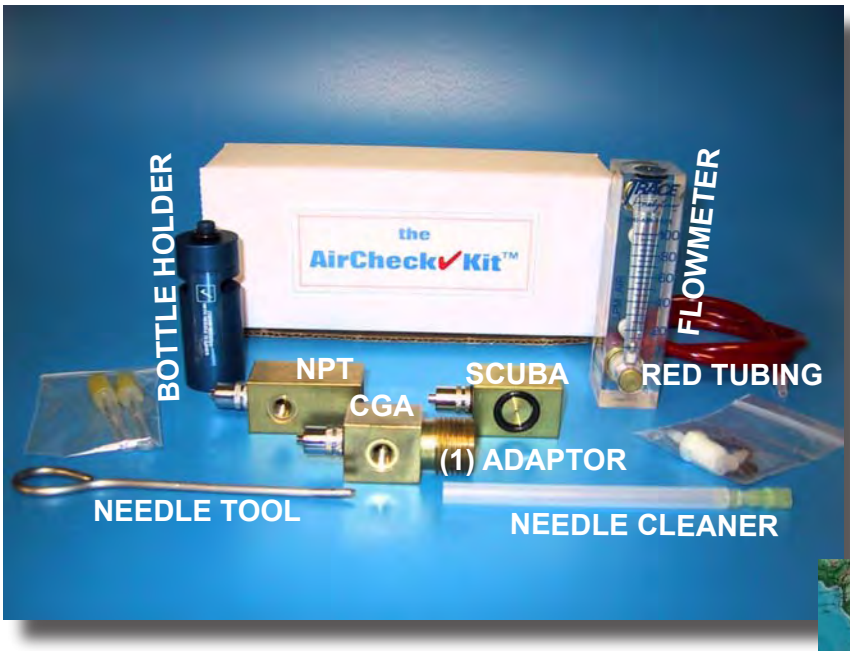
The AirCheck✔Kit™ hardware has a lifetime warranty. If it stops working properly, call us and we'll replace it.

Thanks again for entrusting us with your compressed air quality samples.

Trace Analytics, Inc.
Ruby Ochoa, Owner

AirCheck✔Kit Contents

Your Kit Should Include the Following Items



The following items are included in **the AirCheck✔Kit**.

1	Flowmeter
1	2 Piece Threaded Bottle Holder
2	Spare Needles for Bottle Holder
1	Needle Replacement Tool
1	Needle Cleaner
1	2 ft. Red Tubing
1	Plastic Bag with Spare O-Ring(s), 1 Threaded Luer for Flowmeter, & Barbed Luer
1	Adaptor (modified CGA 346/347, SCUBA, or 1/4"NPT)included in kit, others available at extra cost
1	Carrying Bag (or a white box for special packaging for group purchases)

If an equipment part is damaged or non-working, call Trace for a free replacement. Verify that your kit contains all the necessary items. If any discrepancies, contact us.

SAMPLING MEDIA are also included with your kit depending on the quantity requested. Sampling media sets consist of either:

the Source Bottle (blue cap), Filter Cassette (red label/ shrink wrapped), Ambient Bottle (black cap),

SAMPLING MEDIA

or

the Source Bottle (blue cap), and Filter Cassette (red label/shrink wrapped)

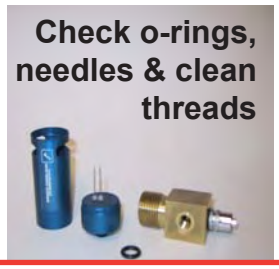
For your convenience, we also provide return shipping containers, and data sheets. When requesting RESTOCKING SUPPLIES for obtaining more samples, please provide your customer number located on the front of **the AirCheck✔Kit Notebook**. The correct terminology for restocks is SAMPLING MEDIA.

AirCheck✔Sampling Instructions

Quick Overview

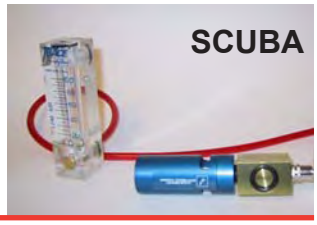
read complete details on following page

1



2

Blow out Fill Hose, **ASSEMBLE EQUIPMENT** as shown, then firmly attach Adaptor to Fill Hose. Use ONLY the blue-capped Source Bottle to obtain the gas and moisture portion of your air test. The FILTER CASSETTE captures the oil mist/particulate portion of your test and MUST BE RETURNED FOR ANALYSIS.



3

OPTIONAL AMBIENT SAMPLE Remove black cap, place bottle close to compressor intake. Recap after ten minutes. Ambient Bottle is not interchangeable with Source Bottle.

4

START TEST. Gently push Source Bottle STRAIGHT DOWN onto Bottle Holder - DO NOT TWIST. Open your system valve and immediately START TIMING TEST. Run test for at least 10 MINUTES* keeping flowmeter reading between 20 and 100 LPM. Remove Source Bottle by pulling straight out. Upon completion of test, INSPECT bottle and filter cassette for problems that may require immediate resampling.

5

ODOR TEST

Sniff the air from the fill hose. Be careful to point the air stream away from your face. Checkmark either None/Slight or Pronounced on the datasheet.

6

STOP TEST, complete data sheet, and return sample bottle(s), filter, and data sheet to lab. Attach postage to preaddressed mailer or send by other convenient method.

RETURN 3 OR 4 ITEMS

WHERE TO TAKE YOUR SAMPLE
Compressor vs. Stored Air

*A NOTE ABOUT SAMPLING TIMES
*See STEP 4 and Yellow shaded box on next page for additional details.

A NOTE ABOUT ADAPTORS
High pressure air sources (1-25 cfm, 1000-5000 psi) use either a CGA or SCUBA adaptor, low pressure air sources (>25 cfm, <500 psi) use a 1/4" NPT adaptor.

Version 10, 2003

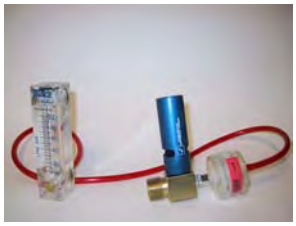
AirCheck✔Kit Detailed Sampling Instructions

STEP 1 – Before Each Test

◆To avoid sampling problems or invalid tests, BEFORE EACH TEST, remove O-Ring from Bottle Holder, unscrew Bottle Holder, run Needle Cleaner through both needles from the bottom of the Bottle Holder. ◆Check that needles are straight, if needed, replace any needles that are crooked, loose, overlybent, or damaged. Use needle tool or needlenose pliers at the base of the needle to remove or tightly replace needle(s). ◆Replace o-rings if necessary, if dry, lubricate. ◆Inspect and clean threaded parts. Reassemble Bottle Holder. If equipment is not working properly, contact Trace for a free replacement.

STEP 2 – Assemble Equipment

(If compressor is being sampled, warm up 10-20 minutes.) Open valve for a few seconds to blow out charging lead. ◆Attach brass Adaptor to charging lead and hand tighten (no air should leak from around this connection). Carefully attach the aluminum Bottle Holder to the threaded hole on the Adaptor (as shown on Quick Overview) taking care that you do not cross-thread the fittings. Gently push & turn the Filter 1/4 turn onto the nickel plated Filter Fitting (male luer fitting) located on the side of the Adaptor (do not remove the clear shrink wrap & do not overtighten). Use Red Tubing with barbed/luer fitting attached (barbed end inside red tubing, luer end toward filter outlet side) to connect the Filter to Flowmeter. Flowmeter must be attached to get a measurement of air flow across the filter.



STEP 3 – Obtain Ambient Sample

◆Simply remove black cap from Ambient Bottle and place bottle as close to compressor intake as possible. Recap after 1-10 minutes. ◆If red septum falls out of cap, replace it, shiny side down. ◆NOTE: AMBIENT BOTTLE MUST ONLY be used for obtaining a sample at the intake of the compressor, IT CANNOT be used for Step 4.

STEP 4 – Start Test from Source

◆Insert the SOURCE BOTTLE (blue capped) into the Bottle Holder by gently pushing bottle straight down. Do not twist or turn bottle – this will damage needles. YOU CANNOT USE THE AMBIENT (black capped) BOTTLE for this step. Do not puncture the Source Bottle stopper more than one time. If you must abort the test for any reason; always use a new Source Bottle. ◆Open your system valve slowly to to obtain a reading between 20 and 100 LPM on Trace's flowmeter. To comply with NFPA 1500 and 1989, run test at a minimum of 50 LPM for 10 minutes (or equivalent) for a total of 500 liters of air. See yellow box for other special sampling requiring 1000 liters or air. If you cannot adjust flowrate between 20 and 100 LPM, stop test and contact Trace. A reading below the 20 LPM mark is not acceptable. Run test for 10 MINUTES or more.

◆IF TESTING ACCORDING TO ANDI , IANTD, or NFPA 99 which requires 1000 liters of air or the air specification for oil or particulate level is 1.0 mg/m3 or less, sample TIME will need to be determined by using the following equation:

$$\frac{1000}{\text{flowrate}} = \text{Sample Time, min.}$$

(For example: if reading on flowmeter is 50 LPM, sample time = 20 min.) YOU MUST USE A FILTER CASSETTE WITH A GREEN LABEL.

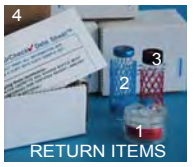
◆The Adaptor and Bottle Holder may become cold and ice up. This is normal. Air is vented from the side port of the Bottle Holder. ◆If possible, the reading on the flowmeter should be steady. If flowrate drops or varies, determine an average flowrate and indicate on data sheet that steady flowrate was not achieved.

STEP 5 – Odor Test

Sniff the air from the fill hose. Be careful to point the air stream away from your face. Checkmark either None/Slight or Pronounced on the datasheet.

STEP 6 – Stop Test

While air is still flowing, remove Source Bottle from Bottle Holder, then close system valve. Place Protective Netting on bottle(s). Return the 1) used Filter, 2) Source Bottle, and 3) Ambient Bottle (if used), and 4) Data Sheet using the return preaddressed mailer. Provide all requested information on Data Sheet to avoid delays upon receipt at lab. INSPECT source bottle stopper, bottle holder needles, and filter for damage that may affect test results. If you observe bent needles, gouges in the stopper, shrink wrapping is missing from filter, or a torn filter; then your sample may not be valid and a retest may be required. Determining this before leaving the sampling location will avoid having to return to take a resample at a later date. Samples determined to have a problem should be marked VOIDED and returned to Trace. A free replacement will be provided. Affix First Class postage to preaddressed return box or arrange for other shipping method of your choice. Ship samples immediately to Trace's lab. Do not submit samples that are over 60 days old (count from sample date). Samples can be returned by mail, or other method such as UPS, Federal Express, etc. Be aware that our lab is located outside of city limits. Any sample sent via Express Mail (through the post office) is delivered with our routine mail late in the day. URGENT OR RUSH SAMPLES should be shipped via UPS, Federal Express, or other similar delivery service.



For further info, refer to Sampling Notes, or call us at 800-247-1024

Version 10.2003

Original Bottle Holder

The original aluminum Bottle Holder has worked well for the majority of Trace's customers. However, because the needles are delicate and require careful placement of the bottle onto the needles, high volume users have found that the needles can become damaged. AirCheck Kits shipped after late July 2003 will include the new two piece Bottle Holder.

New Bottle Holder

The new Bottle Holder is designed to allow users to change out the needles in the field. This should eliminate the need for a spare or having to return the Bottle Holder to Trace for repair. You will be able to replace a damaged needle on-site. This new feature combined with your careful inspection of the Source Bottle and Filter should reduce problems with Inadequate Air Samples or Invalid Samples.

The two-piece Bottle Holder comes with spare needles and a Needle Replacement Tool. Unscrew the Bottle Holder and slide the Tool onto the damaged needle. The Tool has two prongs that fit into two slots on the plastic base of the needle. Turn the Tool counter-clockwise to remove the needle. Hand thread the new needle into the threaded base, then slide the Tool onto the needle to thread completely. The white base of the needle should be visible - the center needle has a stop and will not allow you to thread it too far. However, the outer needle does not have a stop so you will need to be careful not to thread it too far down. The needles should be straight and firmly in place. Needlenose pliers can be used in place of the Needle Tool. Replacement charge for the Needle Tool is $10.00. No charge for replacement needles.

Take One Minute to Inspect Your Samples

Spending a few minutes before and after sampling will greatly reduce the need to resample. For some customers, this could include having to drive hours to retake the sample. We cannot stress enough how these few steps can avoid a phone call from Trace informing you that we were unable to completely analyze your sample due to an Inadequate Air Exchange (problem with the Source Bottle) or torn Filter (problem with too high a flowrate.)

Steps to Take BEFORE Sampling

- Inspect Needles
- Run Needle Cleaner Through Needles
- Do not Reuse a Source Bottle that has been Previously Punctured
- Always Use the Flowmeter to Monitor Air Flow
- Do Not Use a Filter that is not Shrink Wrapped

Steps to Take AFTER Sampling

After obtaining an air sample; inspect the Source Bottle, Bottle Holder Needles, and Filter Cassette. If you notice any problems, replace the needle(s) and/or adjust the flowrate; then retake your sample immediately to avoid the following type problems:

Potential Inadequate Air Exchange

- Bent Needle Tips
- Punctures in Blue Source Bottle Cap
- Twisted, Loose, Missing, or Damaged Needles

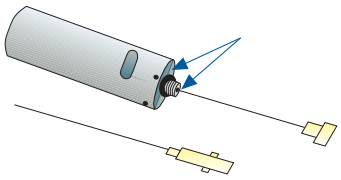
Invalid Filter

- Shrink Wrap Missing from Filter Cassette
- Torn Filter

BottleHolder07.03

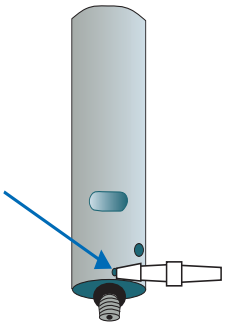
Sampling Notes

Common Questions & Answers



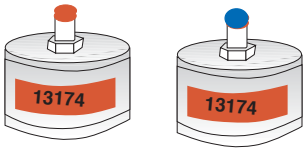
NEEDLE CLEANER

Why won't the Needle Cleaner fit into the Bottle Holder? Most likely, you have not removed the "actual" Needle Cleaner from its protective sheath. The protective sheath looks like the Needle Cleaner but if you examine it carefully; you will see a notch on the plastic end. Pull or gently twist the top 1/4" of the plastic end and the needle cleaner will pull out. When you insert the Needle Cleaner into the holes (one is under the o-ring) gently rotate the Needle Cleaner and move it through the needle to remove any material that may be stuck in the needle.



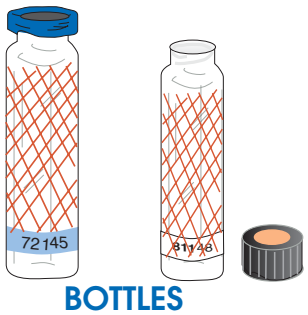
INSUFFICIENT FLOWRATE

Flowrate is lower than 20 LPM, is that ok? No. The minimum reading is 20 LPM, preferably it should be around 50 LPM. If you cannot adjust your output, then locate the plastic baggie that included o-rings and plastic barbed luers. Insert the barbed/luer fitting using the luer side into the lowest side port of the bottle holder. This will reduce the amount of air that is by-passed and subsequently increase the flow through the filter and flowmeter. If you cannot locate the luer fitting, you can use masking tape to cover the lower side port but make sure that you create a small hole in the tape to allow some of the air to still flow through.



FILTERS & CAPS

Some filter cassettes have red caps, others have blue caps, is there a difference? No. **What is the filter for?** The filter captures any oil mist or particulates in the airstream. **ONLY** one filter should be used per each sample. **DO NOT USE FOR MORE THAN ONE SAMPLE. The filter popped off during sampling, is the sample still good?** Probably not. If the sealing band and/or the cassette came apart, this portion of the test is now contaminated. Make sure the filter is connected correctly (see Filter Inlet). When attaching the red tubing to the outlet side of the filter, do not shove the plastic luer in too deeply. It may be necessary to trim the plastic luer slightly



BOTTLES

Why are there two different type of bottles? The Source Bottle has a blue cap and is **ONLY** for sampling your compressed air source. The cap cannot be removed and the stopper is self-sealing. We analyze all the gases and moisture directly from this bottle. **DO NOT PUNCTURE MORE THAN ONCE**. The Ambient Bottle has a removable black cap and is only for sampling your intake air. It is an optional sample, if you did not request it, it will not be included in your kit. We analyze the gases but we can not analyze moisture from this bottle. The ambient bottle's red septum **MUST NOT BE PUNCTURED** because it is not self-sealing.

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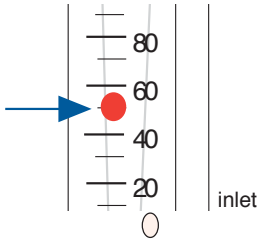
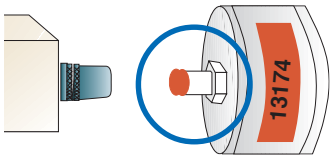
Use the **BLUE** capped bottle for sampling your compressed air source. Use the **BLACK** capped bottle for sampling the intake only. **THE 2 BOTTLES ARE NOT INTERCHANGEABLE.**



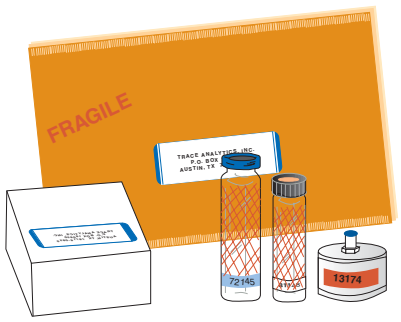
FLOWMETER

What do I do if I cannot control the pressure and/or the flowmeter reading is not steady or fluctuates widely? The flowrate and length of time that the sample is run is important and needs to be as accurate as possible. If the reading is not steady, determine the average flowrate and enter onto the Data Sheet. Make a note in the comment section that flowrate fluctuated. **There is a hole at the top of the flowmeter, should something go there?** No, it is just an outlet for the air. **What is the correct way to read the flowmeter?** Flowmeter should be placed on level surface in vertical position and read at **EYE LEVEL.** Determine flowrate reading to the nearest 5 LPM mark using the middle of the ball to determine flowrate.



FILTER INLET

Which way do I connect the filter to the adaptor? The filter cassette has a plastic female luer fitting attached to the inlet side of the cassette. This female luer fits into the nickel plated male luer that is attached to the brass adaptor. The female luer extends about 1/4" from the "top" side of the filter. The "bottom" side of the filter which allows the filter to sit flatly also has a hole on the bottom of the cassette – do not use as this is the incorrect side for airflow through the filter. Some of the cassettes have the word "INLET" on the correct side.

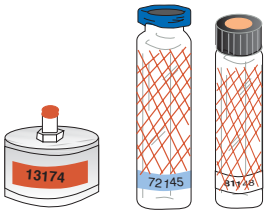


SAMPLE RETURN
RUSH SAMPLES

Where do I return the sample and will it be safe in the padded envelope or small box? Trace's address is listed on page i of this notebook. If you need results in a hurry, please send the sample via UPS, Federal Express, or other trackable method. Since we are located "out in the country" sending via Express Mail is not recommended because delivery is usually after 2-4 p.m. UPS delivers next day shipments by 10:30 a.m. and Federal Express is no later than 10:00 a.m. We receive hundreds of samples safely in the small boxes or padded envelopes; however, occasionally, we do receive a sample that has been damaged. If a particular sample is of extreme importance and would cause great hardship to resample (as in the case of suspected contamination, or if your system is down pending results) then by all means, place the sample in a larger, sturdier shipping container. 99.6% of all samples sent are received in good condition.

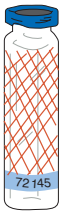
MISSING
ENVELOPES/BOXES

I can't find the envelopes or boxes to return my sample. Use any sturdy box or padded envelope. Envelopes and boxes are provided with each shipment as a courtesy and convenience to our customers. If you wish to have replacements, unfortunately, we will have to bill for shipping & handling charges.



SHELF LIFE
BEFORE & AFTER SAMPLING

How long will the sample bottles and filters last? Before sampling; probably indefinitely but we prefer to have sample bottles and filters used within 2 years of initial shipment. **After sampling; the sample must be analyzed within 60 days.** If a sample older than 60 days is received, we reserve the right to a) not analyze it, or b) place a note in the analytical report stating that the results may not be valid due to the length of time between sampling and analysis.



PUNCTURE HOLES

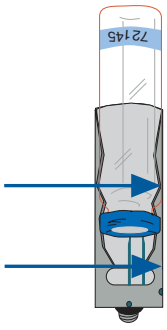
After taking the sample, I noticed that the two puncture holes did not seal back up quickly. What should I do? If you immediately place your finger on top of the source bottle after the bottle is removed from the Bottle Holder; the heat from your finger will quickly cause the stopper to seal back up. This sometimes occurs in cold climates but we have not observed adverse effects on the analytical results since there is a slight back pressure inside the bottle to prevent leakage into the bottle.

INADEQUATE AIR EXCHANGE

PROBLEMS WITH NEEDLES IN BOTTLE HOLDER

BENT, LOOSE, OR BROKEN NEEDLE(S)

The needle(s) is bent, loose, or came out of the Bottle Holder, what should I do? ◆ If the needle(s) is bent, try to straighten using needlenose pliers. Be careful not to squeeze too tightly as the tip of the needle can be damaged. ◆ If the needle(s) are loose, you can attempt to take a sample but return Bottle Holder as soon as possible for a free replacement. ◆ If the needle(s) came out, return the Bottle Holder for a free replacement. If the needle came out immediately after taking a sample and is stuck in the stopper, remove the needle and note that this occurred on the data sheet under the comments section. The sample will probably be acceptable for analysis, if not, you will be notified to take another sample. ◆ If the outer needle bends frequently, the outer needle may be hitting the blue aluminum cap when inserting the Source Bottle into the Bottle Holder. It's a pretty close fit but the diameter of the Bottle Holder is slightly larger than the Source Bottle. Your best bet to avoid hitting the blue cap with the outer needle; is to place the bottle into the Bottle Holder (without puncturing the needles) then gently move it as close to the inner wall closest to the outer needle. See diagram to the left. ◆ If you notice that after taking a sample the grey stopper has deep cuts or gouges; your needle tips may be damaged. The needles are supposed to have a slight bend at the tips. However, they can become damaged when repeatedly hitting the bottle's blue cap or when straightened out with needlenose pliers. Damage may appear as completely straight needles, needle tips bent backward, and constricted or snagged tips. All of these may



NEEDLE HITS CAP

NEEDLE CORES STOPPER

CORRECT POSITION OF NEEDLES

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cause the stopper to be cored out when a bottle is inserted onto the needles. If you suspect this to be the case, return the bottle holder to Trace with a note including your customer number and name. A replacement will be sent at no charge.

How do I take a sample from my fill station if it has the automatic close safety feature? In most cases, the manufacturer has designed these stations to include a remote fill hose. You should outfit this hose with a standard adaptor which will allow you to connect to the AirCheck✔Kit. If you have questions, give us or your compressor manufacturer a call.

FILL STATION PREVENTS CONNECTION

We are a dive shop planning to do Nitrox (oxygen enriched) fills, can we use the AirCheck✔Kit for sampling? Yes. We will need to know which O2 Enriched air specification you need. A minimum of 1000 liters of air will need to be sampled and in some cases a different filter cassette will need to be used for obtaining your condensed hydrocarbons and particulates. Before submitting a sample, contact Trace to update your file, verify sampling instructions, possibly change out the filter cassettes in your kit, and determine if there will be an additional charge.

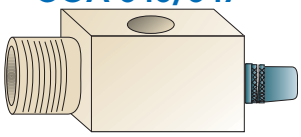
TESTING FOR NITROX

Can I take samples using the AirCheck✔Kit from other compressors or systems? Yes, but you must use the correct adaptor. We have 2 adaptors for high pressure air systems. High pressure is anything over 1,000 psi up to approximately 6,000 psi.

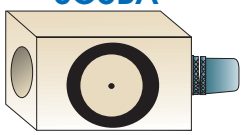
ADAPTORS

The **CGA adaptor** is used for systems set up for filling self contained breathing apparatus (SCBA). Do not use on any other type system because the adaptor threads will be damaged. Likewise, the **SCUBA adaptor** is used for systems set up for high pressure diving.

CGA 346/347

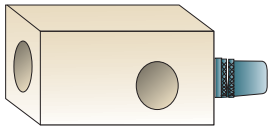


SCUBA



The **1/4" NPT female threaded adaptor** is to be used for **LOW PRESSURE** sampling. We consider low pressure anything under 500 psi. Since there are hundreds of low pressure fittings that are used for hooking up airline respirators, masks, etc., you must obtain the appropriate fitting to connect to the 1/4" NPT adaptor provided.

1/4" NPT FEMALE



All three adaptors have a specially sized orifice to control the amount of airflow through the air sampling filter. If you have trouble obtaining sufficient flow (reading on the flowmeter), contact Trace.

Can I sample an air tank (scuba or scba)? The kit 's primary purpose is for sampling from **air sources** such as compressors or cascade systems. However, a sample can be obtained by using a double yoke and a valve to regulate the flow coming out of the tank. See AirCheck✔Notes, Section 4.

SAMPLE FROM AN AIR TANK

DATA SHEET INFORMATION CRITICAL

The data sheet has important information that we must have to perform the analyses and provide you with a report and certificate. All circled areas must be filled in.

1> Your Customer Number, Name, contact information, air specification(s) and testing frequency are preprinted. Verify for accuracy. Provide missing info and/or correct if necessary.

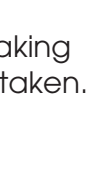
1a> Verify Air Specification listed is correct for the sample being submitted. (R&C)

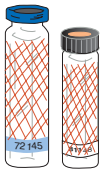
2> Air Source Identification is information that will be used on your report and certificate. This information is for your benefit. When data is reviewed at some time in the future, you will be able to distinguish where the sample was taken. (Will appear on report & certificate(R&C))

3> Use this area to communicate with Trace or write information that will be useful for your review of data, such as number of hours on compressor, date of filter change, etc. Pertinent information will appear on the report.

4> Print name of person taking sample and date sample taken. The sample date **MUST** be recorded. (R&C)

5> **Filter Number** is taken from the red label on the filter cassette. **Cassette must be returned for analysis.** **Flow Rate** is from the Flowmeter in the AirCheck✔Kit. This number is critical to the accuracy of your oil mist and particulate analysis. **Total Minutes Sampled** is also critical, reading must be accurate. **Source Bottle Number** is located on the blue label. **Ambient Bottle** (white label) is an **optional** test for sampling the intake air. **Ambient bottle cannot be used as the source bottle.**





6> Sniff the air being sampled and indicate none/slight or pronounced. If pronounced, your sample will fail to meet air specifications.

7> If air is NOT being used to fill air cylinders, enter the lowest anticipated ambient temperature.

8> Additional information is not required but may be useful to us in the event your sample fails to meet specifications.

9> Mark yes if prior sample from the SAME air source failed to meet specs within 30 days of retest. Only 1 free retest per paid failed sample.

If you have questions, please call us at 800-247-1024 x72

TRACE ANALYTICS, INC.
15768 Hamilton Pool Rd. • Austin, Texas 78738
Voice: 800-AIR-1024 or 512-263-0000 • Fax: 512-263-0002
E-mail: Service@AirCheckLab.com

AirCheck✔Data Sheet™

1> **Information on Record** Cust. No.: Cust. No.

Mark through any data that is incorrect or needs to be updated. Neatly print correct info.

Account Name:	XYZ Company
Primary Contact:	Mr. John Smith
Primary Phone	123-123-1234
Alternate Contact:	Joe Brown
Alternate Phone:	
E-Mail Address:	jsmith@xyz.com
Mailing Address:	123 Avenue Anytown, USA
Shipping Address:	jsmith@xyz.com 123 Avenue Anytown, USA

1a> Air Specification: NFPA 1500
(If above states "or", circle 1)

Testing Frequency: Quarterly

2> **Air Source Identification** (Identify sampling location):

3> **Comments** – Use back if needed.

4> PRINT CAREFULLY
PRINT Name of Person Taking Test
MONTH DAY YEAR

CAREFULLY PRINT ALL INFORMATION AND RETURN A COPY WITH EACH SAMPLE SET.

Sampling Media Identification <5
A FILTER CASSETTE AND SOURCE BOTTLE MUST BE RETURNED FOR CERTIFIED REPORT, AMBIENT BOTTLE IS OPTIONAL.

Filter Number: *red or green label*
Flowrate: *Liters Per Minute*
Total Minutes Sampled: *must be at least 10 min.*
Source Bottle Number: *blue label*
Ambient Bottle Number: *white label*

Odor <6
Required by all specs referencing CGA G-7.1, including CGA Grades D&E, NFPA 1500, & OSHA 1910.134
○ none/slight ○ pronounced

Ambient Temperature at Sampling Location <7
For non-SCBA use requiring CGA or OSHA Specs, enter the Coldest Anticipated Temperature _____°F

Additional Important Information <8
Check all that apply:

Air used for:
❒ SCBA ❒ SCUBA ❒ Airline Respirator
❒ Other, describe

Purification includes:
❒ refrigerated dryer ❒ dessicant dryer ❒ no dryer

Dew point data is provided at atmospheric pressure:
❒ if calculations are required at different pressure, indicate pressure _____

System is:
❒ High Pressure (1,000 – 6,000 psi)
❒ Low Pressure (less than 1,000 psi)

Retest <9
Is this sample a Retest taken within 30 days of failed test? ❒ **Yes** ❒ **No**

SAMPLE ANALYSES

What are the samples analyzed for? The Source and Ambient Bottles are analyzed for oxygen, nitrogen, carbon monoxide, carbon dioxide, methane, and total gaseous hydrocarbons. Only the Source Bottle is analyzed for moisture/dewpoint. The filter is analyzed for particulates and condensed hydrocarbons (oil mist). **Both the Source Bottle and the Filter must be used and returned to lab for a complete test.** The Ambient Bottle is optional. **Why take an ambient sample?** An ambient sample is helpful in determining the quality of air going into your compressor. In the event of a contamination problem, you can determine if the main source of the problem was from the intake air quality or from within your compressor system.

ANALYSES

Normal Turnaround for Sample Analysis

We strive to maintain a 1 working day turnaround of samples received by 2 pm CST. A report is prepared and mailed within 1-2 additional days. Occasionally, we will receive more samples than can be processed in a 24 hour period, equipment problems beyond our control, or holiday closures, prevent us from meeting our goal of 1 day turnaround. Our business hours are 8 am to 5 pm, CST, Monday through Friday. We take most normal holidays and close our laboratory the week between Christmas and New Year.

Samples are received and analyzed in an assigned and numbered order. Reports are then generated in batches after analyses are complete and data is reviewed for accuracy. If a sample or report needs to be pulled from its assigned order or placed in front of other customer's samples, a rush fee must be charged.

Results not in Compliance with Requested Air Specification

If a sample fails to meet the air specification you have requested, you will be notified as soon as the information is available. A report will be generated within a few hours and faxed. Troubleshooting will be provided, and if necessary, additional help is available through our network of Service Distributors and/or contacts in the compressor industry.

Verbal Results

We do not provide verbal results unless the sample is out-of-spec and/or the report has been generated. This policy is designed to protect you from receiving erroneous information.

Rush Analyses

These are samples that you must have written results faster than our normal turnaround. We can provide same day service; however you must schedule these samples **PRIOR** to receipt of the samples in our laboratory. **Occasionally, personnel will not be available, so please call us first so you will not be disappointed.** Samples will be analyzed and a written report faxed the same day as received. Rush fees in addition to the routine analysis fee will be as follows:

Same Day, Standard Business Hours(*)(**)....$100.00 per sample/report
Weekend or Holiday(**).....$300.00 per sample/report
* standard business hours are 8am-5pm, Mon.-Fri.
** must be received by noon and scheduled in advance

ALL RUSH SAMPLES MUST BE SCHEDULED IN ADVANCE

We recommend that you send rush samples via a guaranteed service that will deliver samples to our door by 10 or 10:30 a.m. **Do not send rush samples via priority or Express mail. Delivery of mailed items is too unpredictable.** Our laboratory is located outside the city limits (we're in the country!), we only receive 1 delivery of mail each day. If you send a package via Express Mail, it typically will arrive after 1:00 p.m. and as late as 4:00 p.m. This is not a viable method for sending urgent samples.

Rush Reports

This is for a sample that has already been received and analyzed. If a guaranteed time is required for the printed report, a rush fee of $50 will apply.

FREE RESAMPLES

If a routine sample for compressed breathing air analysis fails to meet the air specifications you have selected for comparison, you are entitled to a free resample if it is taken within 30 days of the initial failure. Only one free resample is allowed per each paid sample. Your sampling media will be replaced at no charge.

FREIGHT

All shipments from Austin, TX are charged a flat fee of $6.00 to $10.00 (depending on the size of the package). Other fees, such as Next Day, 2nd Day, C.O.D., insurance, certified, etc. will be billed at cost plus a handling fee. The $6.00 to $10.00 S&H fee applies to U.S. shipments only. All foreign shipments will be quoted prior to shipment.

INADEQUATE AIR EXCHANGE

Source Bottles are filled with Argon prior to being shipped to you. If for some reason, you do not obtain a valid sample, the results of analysis will show high levels of Argon which is not typically found in air. A report will not be generated, but we will contact you to retake your sample (see Trouble-shooting Section for techniques to prevent this from occurring). You will then be entitled to a free resample if it is taken within 30 days of the initial sample. Your sampling media will be replaced at no charge. Only one free resample is allowed per each paid sample.

REMINDERS

We will either mail, e-mail, or fax a message reminding you that your sample is due to be taken. This reminder is generally done within the first 5 days of the month in which your sample is due. We determine this date from the last date your sample was taken. Our current computerized reminder system does not keep track of individual compressor systems. So, if you have more than one system that you test, the reminder system will not work for you if these samples are not all taken in the same month. We hope to improve this system in the future to allow better tracking.

RESTOCKING/RENEWAL

Upon receipt of your last sample (according to our records), we will either automatically restock your kit if a purchase order is not required, or mail a Renewal Quote notifying you that it is time to restock your kit if a purchase order is required. You must take action by either mailing in your prepayment or notifying us with further instructions, such as your purchase order, etc. If you have not received this notice within 2-3 weeks from the date of your last report, please call us.

SAMPLE MAILERS

See Missing Envelopes/Boxes in Section 2, Sampling Notes.

SAMPLES TAKEN INCORRECTLY

Sampling media will be replaced at no charge if they are taken incorrectly, damaged upon receipt, or lost in transit to our laboratory.

WARRANTY & GUARANTEE

The AirCheck✔Kit has a lifetime warranty and a money-back guarantee. If any part of the hardware fails to work properly, we will replace it at no charge. If you are dissatisfied with the kit and/or our services; we will buy back the kit on a prorated basis and any unused prepaid samples.

Thank You

for choosing the AirCheck✔Kit™

We appreciate your business and look forward to a long lasting relationship with you. We're here to help, so don't hesitate to contact us with your air related questions.

800-247-1024	(U.S. & Canada only)
512-263-0000	Customer Service, ext 72
512-263-0002	Fax
E-mail Address:	Service@AirCheckLab.com
Website Address:	www.AirCheckLab.com
Mailing Address:	Trace Analytics, Inc. 15768 Hamilton Pool Rd. Austin, TX 78738

The AirCheck✔Kit™ hardware has a lifetime warranty. If it stops working properly, call us and we'll replace it.

Thanks again for entrusting us with your compressed air quality samples.

Ruby Ochoa, Owner

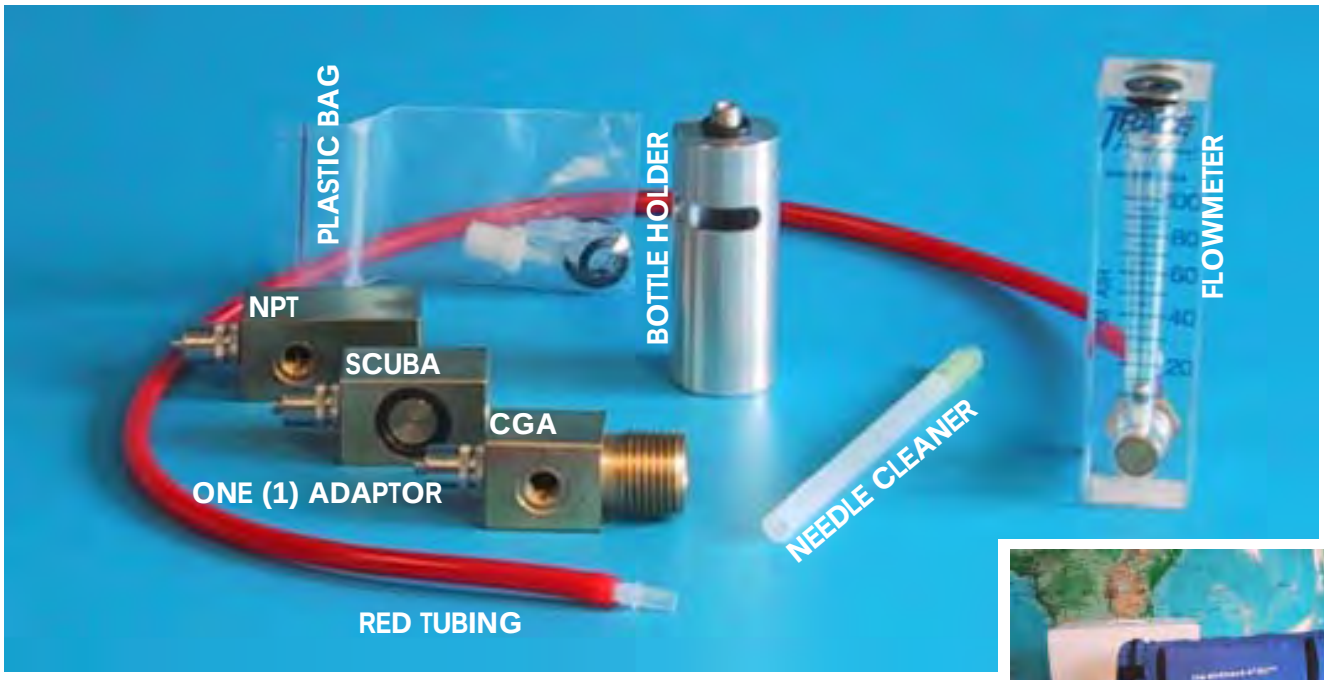
TABLE OF CONTENTS

AirCheck✔Notes, issued periodically are available for viewing and download from our Technical Notes section on our website: www.AirCheckLab.com. If you don't have access to the internet, let us know and we'll be glad to send them to you.

Accreditation Documentation – Scope of Accreditation and Certification documents
Air Sampling Methods – discusses a variety of sampling methods,
Blank Data Sheet – form that must accompany every sample submitted for analysis
Carbon Dioxide – discusses reasons for high co2 levels, valuable info on intake location placement, pipe size, molecular sieves, pressure drops, and general guidelines for assuring a safe air supply
Cylinder Sampling Instructions (SCBA/SCUBA) – 1 page description on how to obtain a sample directly from a scba or scuba cylinder
Example Report – sample report and certificate
Kit Maintenance – General info and advice on keeping the AirCheck✔Kit working properly
Kit Sampling Instructions – included with every AirCheck✔Kit sold
Moisture Analysis – why Trace uses a gas chromatograph/mass spectrometer instead of detector tubes, explains accuracy and precision, standard deviation, relative standard deviation, and confidence intervals
NFPA 1500 – detailed info from Section 5-3 Respiratory Protection
Trace Analytics Overview – company info, lab facilities, analytical techniques and QC procedures

AirCheck✔Kit Contents

Your Kit Should Include the Following Items



The following items are included in **the AirCheck✔Kit.**

1 Flowmeter
1 Bottle Holder
1 Needle Cleaner
1 2 ft. Red Tubing
1 Plastic Bag with Spare O-Ring(s), 1 Threaded Luer for Flowmeter, & Barbed Luer
1 Adaptor (modified CGA 346/347, SCUBA, or 1/4"NPT)included in kit, others available at extra cost
1 Carrying Bag (or a white box for special packaging for group purchases)

If an equipment part is damaged or non-working, call Trace for a free replacement. Verify that your kit contains all the necessary items. If any discrepancies, contact us.

A100-##Y

SAMPLING MEDIA are also included with your kit depending on the quantity requested. Sampling media sets consist of either:

Part Number A100-##X, the Source Bottle (blue cap), Filter Cassette (red label/shrink wrapped), Ambient Bottle (black cap),
or
Part Number A100-##Y, the Source Bottle (blue cap), and Filter Cassette (red label/shrink wrapped)

For your convenience, we also provide return shipping containers, and data sheets.

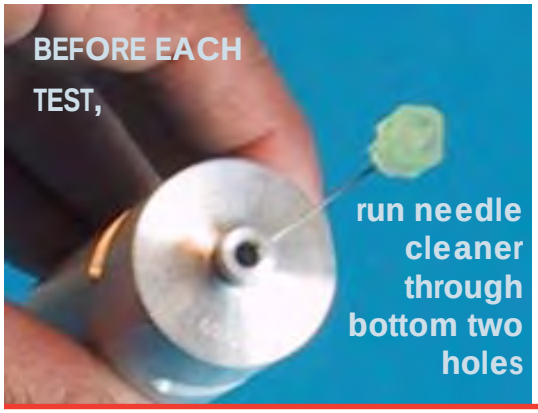
When requesting RESTOCKING SUPPLIES, please provide your customer number. The correct terminology for restocks is SAMPLING MEDIA, Part Number A100-##x (with an ambient) or A100-##y (without an ambient).

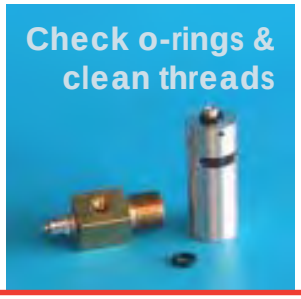
AirCheck✔Sampling Instructions

Quick Overview

read complete details on following page

1





2

Blow out Fill Hose, **ASSEMBLE EQUIPMENT** as shown, then firmly attach Adaptor to Fill Hose. Use ONLY the blue-capped Source Bottle to obtain the gas and moisture portion of your air test. The filter cassette obtains the oil mist/particulate portion of your test and **MUST BE RETURNED FOR ANALYSIS.**

3

OBTAIN AMBIENT SAMPLE (optional) Remove black cap, place bottle close to compressor intake. Recap after ten minutes.

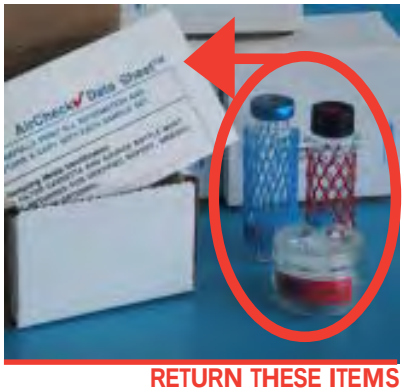
4

START TEST. Gently push Source Bottle **STRAIGHT DOWN** onto Bottle Holder - **DO NOT TWIST.** Open your system valve and immediately START TIMING TEST. Run test for at least 10 MINUTES* keeping flowmeter reading between 20 and 100 LPM. Remove Source Bottle by pulling straight out. Ambient Bottle cannot be used in this Step.

*See Yellow shaded box on next page for instructions on how to sample for Oxygen Compatible Specifications and other non-routine specs.

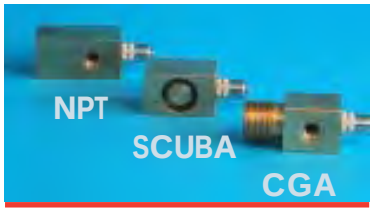
5

STOP TEST, complete data sheet, and return sample bottle(s), filter, and data sheet to lab. Attach postage or send by other convenient method.



RETURN THESE ITEMS

A NOTE ABOUT ADAPTORS



High pressure air sources (1-25 cfm, 1000-5000 psi) use either a CGA or SCUBA adaptor, low pressure air sources (>25 cfm, <500 psi) use a 1/4" NPT adaptor.

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STEP 1 – Before Each Test

◆**To avoid problems with invalid tests, BEFORE EACH TEST,** remove O-Ring from Bottle Holder, run Needle Cleaner through both needles from the bottom of the Bottle Holder. Check that needles are straight, if needed, carefully straighten with needlenose pliers. ◆Replace o-rings if necessary, if dry, lubricate. ◆ Inspect & clean threaded parts. If any piece of equipment is not working properly, return to Trace for a free replacement.

STEP 2 – Assemble Equipment

(If compressor is being sampled, warm up 10-20 minutes.) Open valve for a few seconds to blow out charging lead. ◆Attach brass Adaptor to charging lead and hand tighten **(no air should leak from around this connection).** Carefully attach the aluminum Bottle Holder to the threaded hole on the Adaptor (as shown on Quick Overview) **taking care that you do not cross-thread the fittings.** Gently push & turn the Filter 1/4 turn onto the nickel plated Filter Fitting (male luer fitting) located on the side of the Adaptor **(do not remove the clear shrink wrap & do not overtighten).** Use Red Tubing with barbed/luer fitting attached (barbed end inside red tubing, luer end toward filter outlet side) to connect the Filter to Flowmeter.

STEP 3 – Obtain Ambient Sample (optional)

◆Simply remove black cap from Ambient Bottle and place bottle as close to compressor intake as possible. Recap after 1-10 minutes. ◆If red septum falls out of cap, replace it. ◆**NOTE: AMBIENT BOTTLE MUST ONLY** be used for obtaining a sample at the intake of the compressor, **IT CANNOT** be used for Step 4.

STEP 4 – Start Test from Source Air

◆**WARNING** Bottle holder contains two sharp needles – do not insert fingers into bottle holder. ◆Insert the **SOURCE BOTTLE** (blue capped) into the Bottle Holder by gently pushing bottle **straight down. Do not twist or turn bottle – this will damage needles. YOU CANNOT USE THE AMBIENT (black capped) BOTTLE for this step.** ◆Open your system valve slowly to normal operating pressure. Check flowmeter reading which **MUST BE BETWEEN 20 and 100 LPM.** Begin timing test **(timing must be accurate).** Run test for 10 MINUTES or more.

◆IF TESTING ACCORDING TO ANDI , IANTD, NFPA 99, or other air specification with an oil or particulate level less than 1.0 mg/m3, sample time will need to be determined by using the following equation:

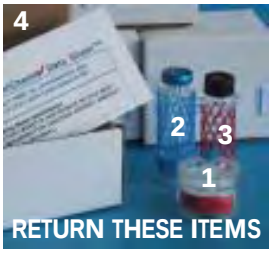
$$\frac{1000}{\text{flowrate}} = \text{Sample Time, min.}$$

(For example: if reading on flowmeter is 50 LPM, sample time = 20 min.) If using the modified GrEspec that includes particle size not to exceed 2υm in diameter **YOU MUST USE A FILTER CASSETTE WITH A GREEN LABEL.**

◆The Adaptor and Bottle Holder may become cold and ice up. This is normal. Air is vented from the side ports of the Bottle Holder. ◆If possible, the reading on the flowmeter should be steady. If flowrate drops or varies, determine an average flowrate and indicate on data sheet that steady flowrate was not achieved. ◆If flowrate drops below 20 and you can not regulate pressure, insert the spare barbed fitting **firmly** into the lowest side port on the bottle holder or cover port to reduce bypass air. You may need to squeeze the barbed fitting tip to get it to fit into the side port. This will increase flowrate. If this does not accomplish a minimum of 20 LPM, stop test, and refer to Sampling Notes.

STEP 5 – Stop Test

While air is still flowing, remove Source Bottle from Bottle Holder, then close system valve. Place Protective Netting on bottle(s). **Return the 1) used Filter, 2) Source Bottle, and 3) Ambient Bottle (if used), and 4) Data Sheet** using the return preaddressed mailer. Complete Data Sheet with ALL requested information **NEATLY**. Affix First Class postage or arrange for other shipping method of your choice. Ship samples immediately to Trace's lab. Do not submit samples that are over 30 days old (count from sample date). Samples can be returned by mail, or other method such as UPS, Federal Express, etc. Be aware that our lab is located outside of city limits. Any sample sent via Express Mail (through the post office) is delivered with our routine mail late in the day. **URGENT SAMPLES** should be shipped via UPS, Federal Express, or other similar delivery service.



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If you have questions, refer to Sampling Notes, then call us