Econo-QUICK™ Arsenic Test Kit

As^{+3} As^{+5}

Kit Part Number: 481298
300 Tests

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Uses same technology as our ETV test kits.

Information on the performance characteristics of our kits can be found at *www.epa.gov/etv/verifications/verification-index.html*, or call ITS at 803-329-9712 for a copy of the ETV verification report. The use of the ETV® Name or Logo does not imply approval or certification of this product nor does it make any explicit or implied warranties or guarantees as to product performance.

FOR BEST RESULTS, FOLLOW KIT INSTRUCTIONS.

WARNING:
Hydrogen and Arsine gases are generated during the test. Work in a well-ventilated area away from open flames and other sources of ignition. Review the Material Safety Data Sheet before handling any chemicals.

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481298-INST
Revision: 03/21/13

ABOUT KIT # 481298:

Part Number: 481298, 300 Tests

This test detects total inorganic Arsenic (As^{+3} and As^{+5})

This Arsenic Test Kit provides a safe, simple, and reliable way to test for Arsenic from 0 to 1.0mg/L (up to 5.0mg/L when using 1/5 dilution method). Follow the instructions carefully to get reliable results. All components are supplied in the kit except for a timer and thermometer. This test tolerates up to 2 mg/L Hydrogen Sulfide without interference. No interference was found for this test kit for Antimony up to 0.5mg/L. No interference from Iron or Sulfate was found. It is recommended that the water sample be 25°C to 28°C (77°F to 82°F). The color chart was standardized at 25°C (77°F). For reference, record the temperature at which the sample was run. Use all reagents and test strips within the allowed shelf life as marked on each container. NOTE: After all 300 tests are completed, you most likely will have some Zinc dust remaining. This is normal.

Kit Components:

- 2 Reaction Bottles, clear PVC, with 10mL (lower) and 50mL (upper) lines (481298-RB)
- 2 White Caps, with white turret, for holding test strip (481196-WL)
- 3 Plastic Spoons (one large pink spoon for First Reagent; one small red spoon for Second Reagent; and one small white spoon for Third Reagent) (481196-C)
- 1 Large Bottle of First Reagent (380 gm) (481196-D)
- 1 Bottle of Second Reagent (65 gm) (481196-E)
- 1 Bottle of Third Reagent (180 gm) (481196-F)
- 3 Bottles of Arsenic Test Strips (100 each) with label - **Caution:** See MSDS 4 on page 7. (481196-G)
- This Instruction Booklet (481298-IB)
- Plastic Bag for Used Test Strips *(Not pictured)* (481196-J)
- 2 Red Caps for mixing (481298-MC)
- Plastic Case for Components (481661)
- Arsenic Test Kit Color Chart (481298-CC)

Needed but not included:

- Thermometer - mercury free
- Stopwatch

About the Patented Reaction (Modified Gutzeit method):

Inorganic Arsenic compounds in the water sample are converted to Arsine gas (AsH_3) by the reaction with Zinc Dust and Tartaric Acid, which generates Hydrogen gas. Ferrous and Nickel salts have been added to accelerate this reaction. The Arsine reacts with the Mercuric Bromide in the test strip pad to form mixed Mercury halogens (such as AsH_2HgBr) that appear with a color change from white to yellow or brown. Potassium Peroxymonosulfate (Second Reagent) is added to oxidize Hydrogen Sulfide to Sulfate.

PRECAUTIONS: Hydrogen gas and Arsine gas are generated during the 10 minute reaction. Work in a well-ventilated area away from fire and other sources of ignition. All reagents are unsuitable for human consumption and must be kept away from children and pets.

US Patent # 6696300

SUGGESTIONS FOR BEST ACCURACY

1. To gain confidence in using this test kit for unknown samples, it is highly recommended that you use the kit on a sample with a known inorganic Arsenic concentration value, or with a sample that has been prepared using an Arsenic standard. By making a "practice run" of the test, you will familiarize yourself with all of the procedures necessary to ensure accurate testing results. Additionally, you will have the opportunity to become familiar with the process of color matching, which will help to ensure accurate test results. ITS suggests the test be run in duplicate for better accuracy.

2. Do not preserve the water sample using Nitric Acid or any other method. Any amounts of strong acids will interfere with the test results; it is best that the water sample be freshly drawn and run within 24 hours. Some water samples held for over 24 hours may read low. The water sample should not contain any significant amount of buffers. If you are planning to send a duplicate sample for ICP laboratory verification, follow preservation requirements for that sample only.

3. The water and ambient air temperature are important for accurate results. The color chart is calibrated at 25°C (77°F). Cold water (15°C/59°F, for example) can cause lighter than normal color development on the testing pad, resulting in a false low reading. Water that is too warm can cause the reaction to proceed too quickly, also resulting in a false low reading. When the water is cold, warm the water sample to 25°C to 28°C (77°F to 82°F) before testing (it is acceptable to use a microwave).

4. Rinse the reaction bottle with clean arsenic-free tap water as soon as possible after the test is run; the zinc may adhere to the bottom of the bottle if the reagents sit too long after the end of the reaction time. If the reagents stick to the bottle, use a bottle brush and clean arsenic-free water, or a (reusable) 20% Hydrochloric Acid rinse to remove the residue in the bottom of the bottle. Be sure to rinse the reaction bottle with clean arsenic-free tap water before running the next test.

5. The Arsenic Test Kit Color Chart can make color matching more accurate. Hold the reacted test pad under the chart and view through the hole in the chart. Choose a color that is close, but clearly darker than the test pad. Next, find a color that is close, but clearly lighter than the test pad. The best color match should be between these two values. For example: If the darker color is 0.1, and the lighter color is 0.025, the result is likely closest to 0.050mg/L arsenic. If an exact color match is not available, choose a color that is the best match.

6. Levels of Hydrogen Sulfide above 2 mg/L can interfere with this test, resulting in elevated Arsenic readings. Our test kit will eliminate up to 2 mg/L of Sulfide interference. To overcome Hydrogen Sulfide levels above 2 mg/L, allow the water sample to sit at room temperature, uncovered and exposed to air for 8 hours (about 50% of the H_2S gas dissipates for every 8 hours).

7. Do not use the kit components beyond the expiration date of the test strips; do not mix components from other kits. Each kit is quality control released for accuracy with a given reagent set. Interchanging components may result in inaccurate results. Some situations may contribute to incorrect readings: a) color matching in poor lighting conditions, b) colorblindness of the operator, and/or c) sample temperatures that are too high or too low.

8. If you have any question or comments, please feel free to contact ITS by telephone at 1-803-329-0162, or by email at its@sensafe.com.

9. Record your results and details for future reference as example below.

Sample No.	1	2	3	4	5
Location					
Date					
Result					

WARNING: Hydrogen and Arsine gases are generated during the test. Work in a well-ventilated area away from open flames and other sources of ignition. Review the Material Safety Data Sheet before handling any chemicals.

Econo-QUICK™ As^{+3} As^{+5} Arsenic Test Kit

TEST PROCEDURE:

Part Number: 481298, 300 Tests

FOLLOW CAREFULLY FOR BEST RESULTS.

1. For best results, the water temperature should be 25°C to 28°C (77°F to 82°F). Use a thermometer to verify the temperature of the sample.
2. To the Reaction Bottle, slowly add the water sample to the upper marked line on the bottle (50 mL).
3. Add 1 level pink spoon of First Reagent to the Reaction Bottle. Cap securely with the red cap and shake vigorously, with bottle upright, for **15 seconds**.
4. Uncap the Reaction Bottle and add 1 level red spoon of the Second Reagent. Recap securely with the red cap and shake vigorously, with bottle upright, for **15 seconds**.
   NOTE: To minimize H_2S interference, allow the sample to sit for **2 minutes** before performing Step 5.
5. Uncap the Reaction Bottle and add 1 level white spoon of Third Reagent. Cap securely with red cap and shake vigorously with bottle upright for **5 seconds**.
6. Immediately uncap and recap securely using the white turret cap. Turret cap must be dry.*
7. Remove one Arsenic test strip from its bottle (immediately recap the test strip bottle). Insert the test strip into the turret as illustrated in Figure A:
   a) Position the strip so that the test pad and red line are facing the back of the white cap (see Figure 1).
   b) Insert the strip into the turret until the red line is even with the top of the turret, and now close (flip down) the turret. This will hold the test strip in place.
   c) Allow the reaction to occur in an undisturbed, well-ventilated area. (NOTE: the test strip must be inserted and oriented correctly, and to the correct depth, in order for the results to be accurate).
8. **Wait 10 minutes**.
9. **After the 10 minute wait (no longer than 12 minutes)**, pull up the turret and carefully remove the test strip (**do not let it fall into the bottle liquid**). Use the Arsenic Test Kit Color Chart to match the test strip pad color **within the next 30 seconds** (colors oxidize when exposed to light). For best matching accuracy position the reacted test pad behind the punched holes in the color chart. View the center of the test strip pad through the hole to confirm the color match and arsenic level. (For best color matching, use natural daylight, but not direct sunlight)
10. Record your results.

Figure A

(Mercuric Bromide strips (Arsenic test strips) will not react with arsine gas if they are wet!)

NOTE: For best accuracy above 0.5mg/L dilute the sample 1 to 5 and repeat the test as follows: fill the reaction bottle to the bottom line with the sample to be tested. Add arsenic-free water to the top line (50mL) of the bottle and then run steps 2 to 9. Multiply the result by 5 to determine the actual arsenic value and record your result.

ATTENTION: After testing is completed, pour the reacted liquid down a drain not used for food preparation, and flush well with water. Rinse the bottle, red cap, and white turret cap with clean water. Shake off excess water from the caps: it is important that the White Turret Caps are dry before the next test. Store used test strips in a plastic bag marked "Used Mercuric Bromide ($HgBr_2$) Test Strips". Keep used test strips away from children and pets, and dispose according to local environmental regulations.

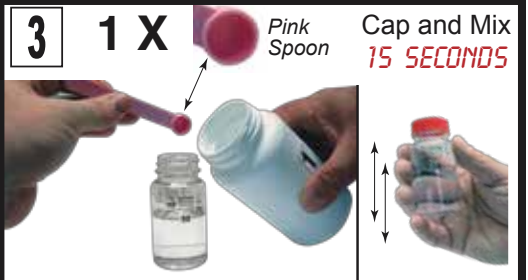
WARNING: Hydrogen and Arsine gases are generated during the test.
Work in a well-ventilated area away from open flames and other sources of ignition.
Review the Material Safety Data Sheet before handling any chemicals.

1

2

3 1 X *Pink Spoon*

Cap and Mix *15 SECONDS*



4 1 X *Red Spoon*

Cap and Mix *15 SECONDS*

Wait *2 MINUTES*

5 1 X *White Spoon*

Cap and Mix *5 SECONDS*

6 Immediately cap with white turret

7

8 Wait *10 MINUTES*

9

10 Record Result

MSDS 1
Material Safety Data Sheet

Section 1 Chemical Identification

Catalog # / Description: Part Number 481196-D
Name: First Reagent

Section 2 Composition / Information on Ingredients

CAS#: 87-69-4	L-Tartaric Acid	98.7%
CAS#: 7720-78-7	Iron (II) Sulfate • $7H_2O$	0.7%
CAS#: 10101-97-0	Nickel (II) Sulfate • $6H_2O$	0.6%

Section 3 Hazards Identification

Precautionary Statements:

- May be irritating to eyes and nasal passages.
- Low toxicity orally, moderately toxicity intravenously.
- Tartaric Acid is reported to have an oral rabbit LD50 at 5000 mg/kg, and a dermal rat LD50 at 485 mg/kg. Tartaric Acid Reagent has minimal toxicological effect. However, inhalation may cause irritation of respiratory tract; ingestion in large amounts may cause gastrointestinal upset; skin or eye contact may cause mild irritation; prolonged exposure may cause allergic reaction. Wash hands after use.
- Iron (II) Sulfate is harmful if swallowed or inhaled. Causes irritation to skin, eyes, and respiratory tract. Affects the liver. Oral mouse LD50: 1520 mg/kg.
- Nickel Sulfate is toxic. Harmful if swallowed. Possible risk of irreversible effects. May cause sensitization by inhalation and skin contact. Possible carcinogen. Toxicity data: oral rat LD50: 264 mg/kg.

Section 4 First-Aid Measures

- If swallowed, wash out mouth with water. Call a physician or the Poison Control Center as a precaution.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes.
- In case of contact with eyes, flush with copious amounts of water for at least 15 minutes.
- If inhaled, remove to fresh air. If breathing is difficult, give oxygen and seek medical advice.

Section 5 Fire Fighting Measures

Not Applicable since the amount of First Reagent per kit is negligible.

Section 6 Exposure Controls / Personal Protection

Do not expose to eyes, skin, or clothing. Keep away from children and pets. Wash hands thoroughly after handling. Maintain general hygienic practices when using this product.

Section 7 Physical and Chemical Properties

Appearance and Odor:

- Solid/semi-solid, white powder. Soluble in water.

Physical Properties:

- Melting Point: Not Applicable
- Vapor Pressure: Not Applicable
- Specific Gravity: Not Applicable
- Vapor Density: Not Applicable

Stability:

- Stable when stored under proper conditions.

Hazardous Polymerization:

- Will not occur.

Incompatibilities:

- Reaction with silver, zinc, aluminum in the presence of water or moisture will release explosive Hydrogen gas.

Section 8 Toxicological Information

Acute Effects:

- Do not breathe dust! Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Section 9 Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used ONLY as a guide. Keep away from children and pets. Store in a dry, cool place. Keep container tightly closed.

MSDS 2
Material Safety Data Sheet

Section 1 Chemical Identification

Catalog # / Description: Part Number 481196-E
Name: Second Reagent (2 MPS)

Section 2 Composition / Information on Ingredients

CAS#	10058-23-8	Potassium Peroxymonosulfate	43%
CAS#	7646-93-7	Potassium Bisulfate	23%
CAS#	7778-80-5	Potassium Sulfate	29%
CAS#	7727-21-1	Potassium Peroxydisulfate	3%
CAS#	546-93-0	Magnesium Carbonate	2%

Comments: NOTE: CAS# for mixture is 70693-62-8

Section 3 Hazards Identification

Emergency Overview:

- Physical Appearance: White, granular material
- Immediate Concerns: DANGER. CORROSIVE. Causes skin and eye damage. Wear goggles or face shield and rubber gloves when handling. May be fatal if swallowed. Irritating to nose and throat. Avoid inhalation or dust. Remove and wash contaminated clothing before reuse.

Potential Health Effects:

- Eyes: DANGER. Corrosive. Causes eye damage. Do not get in eyes.

Section 4 First-Aid Measures

EYES: If contact with eyes occurs: Immediately flush with cold water for at least 15 minutes. Then get immediate medical attention.
SKIN: If contact with skin: Rinse off excess chemical and flush skin with cold water for at least 15 minutes. If skin irritation develops, seek medical attention.
INGESTION: If swallowed: Do not induce vomiting. Drink 1-2 glasses of water to dilute the stomach contents. Never give anything by mouth to an unconscious person. Call a physician immediately.
INHALATION: If inhaled: Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If not breathing, give artificial respiration. Call a physician immediately.

Section 5 Fire Fighting Measures

- This product is not flammable or combustible.
- Will release oxygen when heated, intensifying a fire. Acidic mist may be present.
- Exercise caution when fighting any chemical fire.
- Extinguishing Media: Water

Section 6 Exposure Controls / Personal Protection

Do not expose to eyes, skin, or clothing. Keep away from children and pets. Wash hands thoroughly after handling. Maintain general hygienic practices when using this product.

Section 7 Physical and Chemical Properties

Appearance and Odor:

- Solid. Granular, free-flowing solid. White.
- Odorless

Physical Properties:

- Melting Point: Not Applicable
- Vapor Pressure: Not Volatile
- Specific Gravity: 1.1 to 1.4
- Vapor Density: Not Volatile

Stability:

- Stable when stored under proper conditions.

Hazardous Polymerization:

- Will not occur.

Incompatibilities:

- Mixing with compounds containing halides or active halogens can cause release of the respective halogens if moisture is present. Mixing with cyanides can cause release of hydrogen cyanide gas. Mixing with heavy metal salts such as those of cobalt, nickel, copper, or manganese can cause decomposition with release of oxygen and heat.

Section 8 Toxicological Information

Acute Effects:

- Skin Absorption: >11,000 mg/kg in rabbits
- Oral LD50: 2,000 mg/kg (rat)
- Inhalation LC50: >5 mg/l (rats) (4-hour)

Section 9 Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used ONLY as a guide. Keep away from children and pets.

MSDS 3
Material Safety Data Sheet

Section 1 Chemical Identification

Catalog # / Description: Part Number 481196-F
Name: Third Reagent (3 Zinc)

Section 2 Composition / Information on Ingredients

CAS #: 7440-66-6
Chemical Name: Zinc >99%
Synonyms:

- Blue powder, granular zinc, zinc dust, zinc powder

Section 3 Hazards Identification

Precautionary Statements:

- Flammable solid. This material, like many powders, is capable of causing a dust explosion.
- If inhaled, remove to fresh air. If breathing is difficult, give oxygen and seek medical advice.

Section 4 First-Aid Measures

- If swallowed, wash out mouth with water. Give 2-4 cupfuls of milk or water. Call a physician or the Poison Control Center.
- In case of skin contact, flush with copious amounts of water for at least 2 minutes. Remove contaminated clothing and shoes.
- In case of contact with eyes, flush with copious amounts of water for at least 5 minutes. Call a physician.
- If inhaled, remove to fresh air. If breathing is difficult, give oxygen and seek medical advice.

Section 5 Fire Fighting Measures

Fire/Explosion Hazard:

- Dust may form a flammable/explosive mixture with air. May form explosive mixture with oxidizers.

Extinguishing Media:

- Sand or inert dry powder. Do not use water.

Section 6 Exposure Controls / Personal Protection

Do not get in eyes, on skin, on clothing. Keep away from children and pets. Wash hands thoroughly after handling. Use with adequate ventilation. Maintain general hygienic practices when using this product.

Section 7 Physical and Chemical Properties

Appearance and Odor:
Solid bluish-gray powder
Physical Properties:

- Melting Point: 419°C / 786°F
- Vapor Pressure: 1mm Hg at 487°C / 909°F
- Specific Gravity: 7.14
- Vapor Density: Not Applicable

Stability:

- Stable when stored dried and at room temperature.

Hazardous Polymerization:

- Will not occur.

Section 8 Toxicological Information

- Skin and eye irritation may result from intermittent exposure.
- Avoid creating dust. DO NOT breathe dust.

Section 9 Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used ONLY as a guide. Dispose of empty bottle as normal trash. Keep away from children and pets.

MSDS 4
Material Safety Data Sheet

Section 1 Chemical Identification

Catalog # / Description: Part Number 481196-G
Name: Arsenic Quick™ Test Strip

Section 2 Composition / Information on Ingredients

CAS #: 7789-47-1
Synonyms:

- Toxic ingredient is: Mercuric Bromide.

Section 3 Hazards Identification

Precautionary Statements:

- Toxic poison is contained in testing pad (about 1mg / strip).
- Mercuric Bromide is reported to have an oral rat LD50 at 40mg/kg, and a dermal rat LD50 at 100mg/kg.

Section 4 First-Aid Measures

- If swallowed, wash out mouth with water. Call a physician or the Poison Control Center as a precaution.
- In case of skin contact, flush with copious amounts of water for at least 2 minutes. Remove contaminated clothing and shoes.
- In case of contact with eyes, flush with copious amounts of water for at least 5 minutes.
- If inhaled, remove to fresh air. If breathing is difficult, give oxygen and seek medical advice. Do not give mouth to mouth.

Section 5 Fire Fighting Measures

Not Applicable since the amount of Mercury per kit is negligible.

Section 6 Exposure Controls / Personal Protection

Do not expose to eyes, skin, or clothing. Keep away from children and pets. Wash hands thoroughly after handling. Maintain general hygienic practices when using this product.

Section 7 Physical and Chemical Properties

Appearance and Odor:

- Solid/semi-solid, white paper pad (containing Mercuric Bromide) attached to plastic strip.

Physical Properties:

- Melting Point: Not Applicable
- Vapor Pressure: Not Applicable
- Specific Gravity: Not Applicable
- Vapor Density: Not Applicable

Stability:

- Stable when stored under proper conditions.

Hazardous Polymerization:

- Will not occur.

Section 8 Toxicological Information

Acute Effects:

- Each strip contains about 1mg Mercuric Bromide so toxicological effect is minimal because of the amount. However, material is toxic and should be handled carefully to minimize exposure. Place all used test strips into plastic bag labeled “Used Test Strips”. Dispose of used strips per environmental and regulatory requirements in your community. Wash hands after use.

Section 9 Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used ONLY as a guide. Dispose of the used test strips as regulations require. Keep away from children and pets.

LETTER FROM THE KIT INVENTOR

Thank you for purchasing our U.S. Patented Arsenic Econo Quick™ Kit. Our company has trademarked the kits Quick™ because of the short 14 minute time for analysis.

The Drinking Water standard of the US EPA and the World Health Organization (WHO) allows a maximum contaminant level of 10 ppb (µg/L) for Arsenic. The old US EPA level of 50 ppb (µg/L) remains as the maximum contaminant level for most countries in the world.

For several years, Industrial Test Systems, Inc. (ITS) committed to a major research and development effort to provide better and safer arsenic test kits. For these efforts US Patent# 6696300 was granted for the acceleration of arsenic detection through the addition of iron and nickel salts. This innovation permits arsenic field tests to be completed in less time. The test was made safer by using tartaric acid, instead of liquid acids, for the reduction of inorganic arsenic (As +3/As+5) to arsine gas. The Quick™ II series of kits use a modified turret/aperture cap, allowing detection of arsenic below 5ppb (ug//L). The reduction reactions utilized in all kits are as follows:

$Zn + 2H^+ \rightarrow Zn^{+2} + H_2$ (gas) and $As_4O_6 + 12\ Zn + 24H^+ \rightarrow 4AsH_3$(gas) + 12 Zn^{+2} + $6H_2O$ (pH 1.6)

The analysis is performed in a closed reaction bottle (plastic) with an appropriate volume of sample (50 to 500 ml). After the 10 minute reduction reaction, the mercuric bromide strip or testing pad is removed and matched to the color chart or color analyzed by the Quick™ Arsenic Scan instrument. A light yellow to brown color change indicates that arsenic is present. The color intensity is proportionately related to the concentration of arsenic in the sample. NOTE: ITS test kits detect free inorganic arsenic only. ICP-MS methods detect inorganic and organic arsenic. If organic arsenic is present, ITS kit results can be expected to give lower values when compared to ICP-MS results.

Inorganic Arsenic Kits Available:

US Patent # 6696300

PRODUCT NAME (PART NUMBER)	OPTIMUM RANGE* ppb (µg/L)	TYPICAL COLOR CHART DETECTION LEVELS ppb (µg/L)	TYPICAL ACCURACY** USING QUICK™ ARSENIC SCAN	PRICE IN USD	# OF TESTS
Arsenic Quick™ **(481396)**	10 to 200	0, 5, 10, 20, 60, 100, 300, 500, >500, >>500	+/-18 ppb or +/-30%	**$169.99**	**100**
Arsenic Quick™ II **(481303)**	3 to 20	<1, 2, 3, 4, 5, 6, 7, 8, 10, 13, 20, 25, 30, 40, >50, >80, >120, >160	+/-1.2 ppb or +/-16%	**$219.99**	**50**
Arsenic Low Range Quick™ II **(481301)**	1 to 10	<0.5, 1, 1.5, 2, 3, 4, 5, 6, 7, 8, 12, >20, >30, >50	+/-0.8 ppb or +/-14%	**$349.99**	**50**
Arsenic Ultra-Low Quick™ II **(481300)**	0.5 to 6	0,0.3,0.7, 1.0, 1.5, 2, 2.5, 3, 3.5, 4, 5, 6, 8, 10, 13, 20, >20	+/-0.4 ppb or +/-12%	**$299.99**	**25**
Quick™ Arsenic Scan Instrument **(481305)**	—	0.01 to >1.00 color density ppb (µg/L) (as low as 0.2 ppb (µg/L) arsenic)	(see above)	**$1,799.99**	**—**

Information on the performance characteristics of Quick™ can be found at www.epa.gov/etv, or call ITS at 1-800-861-9712 for a copy of the ETV verification report. The use of the ETV® Name or Logo does not imply approval or certification of this product nor does it make any explicit or implied warranties or guarantees as to product performance.

** As with any test, actual results will fall within a range around the actual value. The Typical Accuracy listed is from data generated by a technician in our lab using the Quick™ Arsenic Scan instrument measuring interference-free aqueous arsenic standards. Kit expected accuracy is the larger of the two values listed. {Example using Quick™: If the mean is 40 ppb, then the typical accuracy is +/-18 ppb which is larger than +/-12 ppb (40 ppb X 30%)}.

Where precision is important, ITS recommends that you run the water sample in duplicate since the typical color matching is within one color block. For best precision consider the purchase of our Quick™ Arsenic Scan instrument. This unit is ideal for use with all test kits. Please contact our sales department at 803-329-9712 for more information or to order the Quick™ Arsenic Scan instrument.

Typical shelf life of kits is over 12 months. The kit includes First Reagent (Tartaric acid with iron and nickel salts); Second Reagent (MPS, an oxidizer); Third Reagent (zinc dust); and mercuric bromide strips, which contain about 1mg mercury per strip. After use, the strips should be discarded according to local environmental regulations. Valuable safety information about the kit is in the MSDS literature. As a safeguard to minimize the operator's exposure to arsine and hydrogen gas, please run all tests in a well-ventilated area away from open flames and other sources of ignition. Arsine gas is highly toxic; this precaution becomes more urgent if the water sample has high arsenic levels.

Cordially yours,

Ivars Jaunakais, Analytical Chemist

email: ivars@sensafe.com