

COMPRESSED BREATHING AIR TEST TUBES



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COMPRESSED BREATHING AIR ANALYSIS KIT

PART NO. 7015406

Sensidyne CBA system allows anyone to simply, quickly and quantitatively measure the quality of their compressed breathing air. Easy to use, the CBA system is an accurate and precise method for detecting Carbon Monoxide, Carbon Dioxide, oil mist, water vapor, and oxygen.

Sensidyne measures all four of the common contaminants in breathing air and provides a quick means to monitor the oxygen level. Using the CBA direct-reading detector tubes, simply connect the pressure reducer to your high-pressure air source (max: 3000 psi), compressor, cylinder or airline and adjust the flowmeter to the required setting. Sensidyne takes care of your entire measurement problem with one common system, reducing training and saving time and money.

Industrial operations often produce or are performed in the presence of harmful airborne contaminants. When a self-contained breathing apparatus or other devices are used for respiratory protection, the quality of the breathing air requires special attention. Contaminants entering the compressor or contaminants generated by the compressor can be harmful for the worker and the respiratory equipment. Minimal safety requires that these potentially hazardous contaminants be monitored.

Our CBA Kit is a convenient economical system for testing the quality of your compressed breathing air. You do not have to learn how to operate and calibrate sophisticated instrumentation. With the CBA kit, the measurement is quick and simple and does not require user calibration.

Consisting of a backpressure compensated two-stage regulator with flowmeter and tube holder, the CBA system can make all the required measurements with just five direct-reading detection tubes. The flowmeter is adjustable for 50 to 600 cc/min. and the system accepts up to 3000 psi with a standard No. 346 CGA fitting. The actual measurement is simple and accurate. Just snap off both "break away" ends of the tube, insert the tube into the tube holder with the



directional arrow pointing down, and adjust the flowmeter to the specified flow rate. Allow the prescribed flow time to pass. A precisely measured volume of air is injected into the tube where it contacts the reagent.

The reagent immediately changes color and reacts quantitatively to provide a length-of-stain indication. The farther the color stain travels along the tube, the higher the concentration. After the required time, note where the color stain stops and take the measurement from the scale printed on the direct-reading tube. It is safe, precise and fast.

Tube No.	Target Gas	Measuring Range	Flow Rate (ml/min.)	Time	Humidity Range	Color Change
601SP	Carbon Dioxide	100-3000 ppm	175	2 min	0-90 %RH	Purplish Blue to Pale Pink
600SP	Carbon Monoxide	5-100 ppm	175	2 min	20-90 %RH	Yellow to Dark Brown
602SP	Oil Mist	0.3-1.5 mg/M ³	470	25 min	0-100 %RH	Yellow to Pale Blue
604SP	Oxygen	2-24 %v	50	n/a	20-90 %RH	White to Brown
603SP	Water Vapor	20-160 mg/M ³	500	1.4 min	n/a	Yellow to Yellowish Green/Blue

NOTES: If any of the contaminants are above the limits specified, the filtration system on the compressed air system should be checked immediately. All tubes have a temperature range of 0-40°C.

SENSIDYNE®

"The Standard for Professionals"™

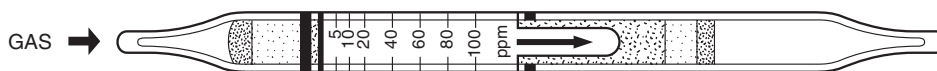
16333 Bay Vista Dr. • Clearwater, FL 33760 • 800-451-9444
727-530-3602 • fax: 727-539-0550 • www.sensidyne.com



Certificate 970084

Tube No.
600SP

COMPRESSED BREATHING AIR TEST TUBE FOR **CARBON MONOXIDE**



1. PERFORMANCE

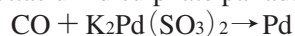
- | | |
|--------------------------|---|
| 1) Measuring range | : 5-100 ppm |
| 2) Detectable limit | : 3 ppm |
| 3) Shelf life | : 2 years |
| 4) Operating temperature | : 0 ~ 40 °C |
| 5) Reading | : Direct reading from the scale printed on the tube |
| 6) Colour change | : Yellow → Dark brown |

2. RELATIVE STANDARD DEVIATION

RSD-low : 10 % RSD-mid. : 10 % RSD-high : 10 %

3. CHEMICAL REACTION

Pottasium disulphate palladate (II) is reduced and Palladium is liberated.



4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

5. PRESET/MEASUREMENT CONDITIONS

PRESET CONDITION

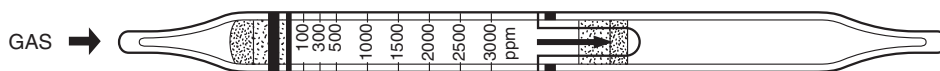
- | | |
|-----------------|-----------------------------------|
| 1) 2nd pressure | : 0.6 kg/cm ² (60 Kpa) |
| 2) Flow rate | : 2.0 ℓ/min. |

MEASUREMENT CONDITION

Sampling time : 2.0 minutes

Tube No.
601SP

COMPRESSED BREATHING AIR TEST TUBE FOR **CARBON DIOXIDE**



1. PERFORMANCE

- | | |
|--------------------------|---|
| 1) Measuring range | : 100-3,000 ppm |
| 2) Detectable limit | : 20 ppm |
| 3) Shelf life | : 2 years |
| 4) Operating temperature | : 0 ~ 40 °C |
| 5) Reading | : Direct reading from the scale printed on the tube |
| 6) Colour change | : Purplish blue → Pale pink |

2. RELATIVE STANDARD DEVIATION

RSD-low : 10 % RSD-mid. : 10 % RSD-high : 10 %

3. CHEMICAL REACTION

By reacting with an Alkali, PH indicator is discoloured.



4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

5. PRESET/MEASUREMENT CONDITIONS

PRESET CONDITION

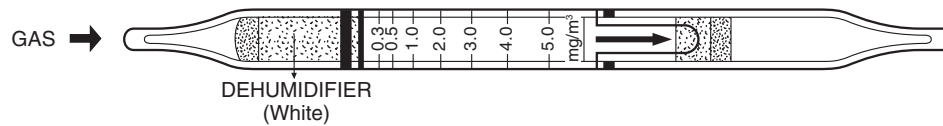
- | | |
|-----------------|------------------------------------|
| 1) 2nd pressure | : 1.0 kg/cm ² (100 Kpa) |
| 2) Flow rate | : 2.0 ℓ/min. |

MEASUREMENT CONDITION

Sampling time : 2.0 minutes

Tube No.
602SP

COMPRESSED BREATHING AIR TEST TUBE FOR **OIL MIST**



1. PERFORMANCE

- | | |
|--------------------------|---|
| 1) Measuring range | : 0.3-5 mg/m ³ |
| 2) Detectable limit | : 0.1 mg/m ³ |
| 3) Shelf life | : 2 years |
| 4) Operating temperature | : 0 ~ 40 °C |
| 5) Reading | : Direct reading from the scale printed on the tube |
| 6) Colour change | : Yellow → Pale blue |

2. RELATIVE STANDARD DEVIATION

RSD-low : 10 % RSD-mid. : 10 % RSD-high : 10 %

3. CHEMICAL REACTION

Chromium oxide is reduced.



4. CALIBRATION OF THE TUBE

INFRARED SPECTOPHOTOMETRY

5. PRESET/MEASUREMENT CONDITIONS

PRESET CONDITION

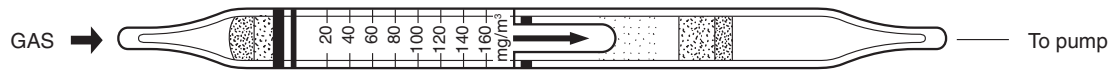
- | | |
|-----------------|-----------------------------------|
| 1) 2nd pressure | : 1.0 kg/cm ² (100Kpa) |
| 2) Flow rate | : 3.0 ℓ/min. |

MEASUREMENT CONDITION

- | | |
|---------------|----------------|
| Sampling time | : 25.0 minutes |
|---------------|----------------|

Tube No.
603SPA

COMPRESSED BREATHING AIR TEST TUBE FOR WATER VAPOUR



1. PERFORMANCE

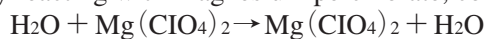
- 1) Measuring range : 20-160 mg/m³
- 2) Detectable limit : 15 mg/m³
- 3) Shelf life : 2 years
- 4) Operating temperature : 0 ~ 40 °C
- 5) Reading : Direct reading from the scale printed on the tube
- 6) Colour change : Yellow → Yellowish green or Blue

2. RELATIVE STANDARD DEVIATION

RSD-low : 10 % RSD-mid. : 10 % RSD-high : 10 %

3. CHEMICAL REACTION

By reacting with Magnesium perchlorate, complex salt is produced and PH indicator is discoloured.



4. CALIBRATION OF THE TUBE

DEW-POINT METER

5. PRESET/MEASUREMENT CONDITIONS

PRESET CONDITION

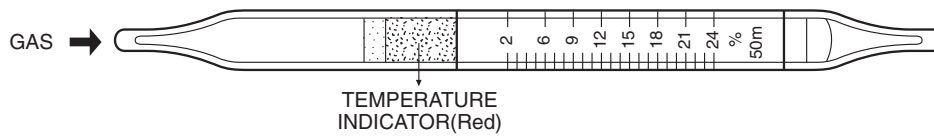
- 1) 2nd pressure : 1.0 kg/cm² (100 Kpa)
- 2) Flow rate : 2.0 ℓ/min.

MEASUREMENT CONDITION

- Sampling time : 1.0 minutes

Tube No.
604SP

COMPRESSED BREATHING AIR TEST TUBE FOR **OXYGEN**



1. PERFORMANCE

- 1) Measuring range : 2-24 %
- 2) Shelf life : 2 years
- 3) Operating temperature : 0 ~ 40 °C
- 4) Temperature compensation : (Necessary (0 ~ 10/30 ~ 40 °C) (Refer to "SPECIAL NOTE"))
- 5) Reading : Direct reading from the scale printed on the tube
- 6) Colour change : White → Brown.

2. RELATIVE STANDARD DEVIATION

RSD-low : 5 % RSD-mid. : 5 % RSD-high : 5 %

3. CHEMICAL REACTION

Oxygen reacts with alkaline pyrogallol.

4. CALIBRATION OF THE TUBE

STANDARD GAS CYLINDER METHOD

5. PRESET/MEASUREMENT CONDITIONS

PRESET CONDITION

- 1) 2nd pressure : 0.6 kg/cm² (60 Kpa)
- 2) Flow rate : 2.0 ℓ/min.

MEASUREMENT CONDITION

- 1) Sampling amount : 50 mℓ

SPECIAL NOTE

- 1) TEMPERATURE COMPENSATION :
At 0 °C (32 °C) to 10 °C (86 °C), multiply the reading value by 1.05.
At 30 °C (86 °C) to 40 °C (104 °C), multiply the reading value by 0.95.
- 2) The sampling is made with an optional 50mℓ plastic syringe which collects accurate sampling volume in 50mℓ and 1mℓ vinyl tube which connects the syringe and the detector rubber, is recommendable in order to prevent influence by ambient oxygen.
- 3) Pressure regulator of which diaphragm is made of stainless steel or Teflon coated rubber, is recommendable in order to prevent influence by ambient oxygen.