



White Paper

Title: MAP Headspace Gas Testing – Certified Test Gas Requirements

TSN Number: 28

File:\\MII-

SRV1\Metron\Bridge_Analyzers\Customer_Service_Documentation\White_Papers\MAP_CAT\28 Use of Certified Test Gas.docx

Created by: R. Schrader

Last Revision Date: 25-Mar-08

Overview of MAP Headspace Gas Measurement – and the need for Certified Test Gas:

As the gases used in package headspace have become more complex and the accuracy requirements for them more strict, the accuracy and veracity of the headspace gas analyzer has become a more important issue in the production QA process. The need to have a simple and reliable method to verify that gas analyzer functionality and accuracy has arisen from this circumstance.

The only reliable method available to provide this verification is to use Certified Test Gas, which is usually readily available from local gas vendors. This test gas can be blended to match the nominal or average headspace gas anticipated to be used in packages measured by the gas analyzer, and is provided at relatively low cost in 'Certified Standard' form, which yields 2% relative accuracy. The ready availability of a test gas of known accuracy makes analyzer verification a relatively simple task, as rigorous methods may be used to verify each step of analyzer operation and accuracy.

Test Gas Ordering:

There are many gas blenders who can provide test gas. A partial list includes Airgas, Linde, Air Liquide, Praxair, Matheson Trigas, MG, and Scott Specialty Gas. If possible, it is preferred to use an existing vendor that is presently supplying gas to your operation for this test gas. If this choice is not available, contact one of the vendors in the list above to purchase the test gas and supporting accessories. On the last page, vendor P/N's for Certified Test Gases, regulators, and a gas cylinder transport cart are given for Airgas, and may be used for reference for this or other suppliers. The cylinders available, fittings, regulators, and equipment carts are well standardized among gas vendors, and can be relatively easily cross-referenced. The last page of this document may be used as an ordering guide – and while several examples of typical fill gases are shown, care should be taken to request a test gas that represents your fill process.

The prices shown are representative of the products listed and may be used for general benchmarking of final product costs – which vary from vendor to vendor.

Bridge Analyzers, Inc.
PO Box 39325
Solon, Ohio 44139 USA

(510) 337-1605 office
(216) 274-9262 fax
support@bridgeanalyzers.com



White Paper

Bridge 001246 Cal Stand - Test Gas Cylinder Interface to the MAP Gas Analyzer:

Bridge has developed an interface system that goes between the 20 psi regulator output of the Certified Test Gas cylinder and the MAP gas analyzer, and consists of a stand with an adjustable flow meter and gas delivery interface that equilibrates the sample gas delivery to ambient air. This product provides a means to deliver test gas at a known and adjustable flow rate, while maintaining ambient air pressure at the MAP analyzer needle. It readily facilitates MAP gas analyzer verification testing and/or calibration if required. The use of an adjustable flow gage further allows the user to verify product sample flow rate – enabling the easy diagnosis of plugged needles or filters, weak pump action, or leaking sample lines and accessories. It is a very valuable test tool for local analyzer verification. See the product brochure for the Bridge P/N 001246 for further details.

Bridge Analyzers, Inc.
PO Box 39325
Solon, Ohio 44139 USA

(510) 337-1605 office
(216) 274-9262 fax
support@bridgeanalyzers.com