



ANSI/ISEA

102-1990 (R2015)

American National Standard
for Gas Detector Tube Units—
Short Term Type for Toxic Gases
and Vapors in Working Environments

ANSI/ISEA 102-1990 (R2015)

**American National Standard
for Gas Detector Tube Units—**

**Short Term Type for Toxic Gases and
Vapors in Working Environments**

**Secretariat
International Safety Equipment Association**

**Approved May 25, 1990 (reaffirmed February 26, 2015)
American National Standards Institute, Inc.**

American National Standard

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether they have approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard. American National Standards are subject to periodic review and users are cautioned to obtain the latest editions.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no persons shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of publication. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published by

**International Safety Equipment Association
1901 N. Moore Street, Suite 808, Arlington, VA 22209**

Copyright© 1990 by International Safety Equipment Association
All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

Printed in the United States of America

FOREWORD (This foreword is not part of American National Standard ANSI/ISEA 102-1990)

This standard has been drafted to establish a voluntary standard for gas detector tube units. The standard was developed from the National Institute for Occupational Safety and Health (NIOSH), originally titled 42 Code of Federal Regulations 84-1973. Its use was discontinued in recent years.

The purpose of this standard is to provide a means of continual testing of gas detector tube units and components for accurate performance in working environments, by determining the concentration of toxic gases and vapors.

This standard was processed and approved for submittal to ANSI by the Canvass Method. The following organizations recognized as having an interest in the standardization of diffusive sampling devices were contacted prior to the approval of this standard. Inclusion in this list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI.

AFL-CIO	International Chemical Workers Union
Alliance for American Insurers	Matheson Gas Products
American Gas Association	Mobil Oil Corporation
American Industrial Hygiene Association	National Fire Protection Association
American Iron and Steel Institute	National Institute for Occupational Safety and Health
American Mining Congress	National Safety Council
American Petroleum Institute	Occupational Safety and Health Administration
Bituminous Coal Operators Association	Oil, Chemical and Atomic Workers Union
Chemical Manufacturer Association	Sensidyne, Inc.
Compressed Gas Association	United Auto Workers
Edison Electric Institute	United Mine Workers
Hazardous Material Research Center	United Steel Workers
Industrial Health Foundation	U.S. Department of Labor
Industrial Safety Equipment Association	
Instrument Society of America	
International Brotherhood of Electrical Workers	

Suggestions for the improvement of this standard will be welcome. They should be sent to the ISEA, 1901 No. Moore Street, #808, Arlington, VA 22209, isea@safetysystem.org.

Contents

SECTION	PAGE
1. Purpose.....	5
2. Referenced Standards	5
3. Definitions	5
4. Required Information.....	6
5. Construction and Performance Requirements	7
5.1 General Requirements	7
5.2 Length of Stain Type Detector Tubes	7
5.3 Color Comparison Type Detector Tubes.....	7
5.4 Calibration	8
6. Sampling Pumps	8
7. Quality Assurance	9
7.1 Sampling Plan	9
7.2 Acceptable Quality Level.....	9
7.3 Inspection Levels	9
Appendix Recommendation and Precaution concerning Gas Detector Tube Unit Use.....	10