

Application Data Sheet

GC

Gas Chromatograph

Simultaneous Analysis of Sulfur Compounds

The general-purpose BID-2010 Plus barrier discharge ionization detector (BID) offers high-sensitivity detection of all components other than He and Ne. The BID enables simultaneous analysis of sulfur compounds that include H₂S, COS, CS₂ with high sensitivity. This datasheet introduces an example of simultaneous analysis of sulfur compounds using the Shimadzu BID-2010 Plus barrier discharge ionization detector.

Equipment Used and Analytical Conditions

Equipment Used

Software **GCsolution**

GC-2010 Plus A + BID-2010 Plus Gas Chromatograph

Gas Sampler MGS-2010

Injection Port Unit SPLITTER INJ*1

*1: Special unit to prevent atmospheric components from entering. Treated to prevent adsorption of sulfur components.

Analytical Conditions

Column Select Low Sulfur (0.32 mm I.D. × 60 m)

Column Temp. 35 °C (8 min) - 10 °C/min - 200 °C (0 min), Total 24.5 min

Carrier Gas Control Linear velocity Linear Velocity 72.6 cm/sec (He)

Injection Mode Split (1:3) Detector Temp. 230 °C

Discharge Gas Flowrate 70 mL/min (He)

Injection Volume 1 mL

Results

The following is an example of the analysis of gas mixed with sulfur compounds at 1 ppm (balanced with He). Using the BID-2010 Plus enables the simultaneous analysis of sulfur compounds with high sensitivity.

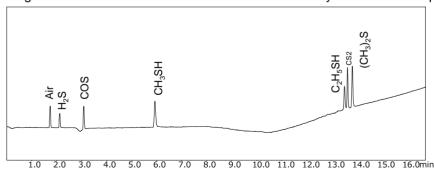


Fig. 1: Chromatogram of Gas Mixed with Sulfur Compounds at 1 ppm (balanced with He)

Table 1: S/N of Each Component*2

	S/N
Component	BID-2010 Plus
H₂S	130
cos	214
CH₃SH	238
C₂H₅SH	205
CS ₂	364
(CH ₃) ₂ S	370

*2: These values are not guaranteed and are shown as reference values.



Shimadzu Corporation

www.shimadzu.com/an/

For Research Use Only. Not for use in diagnostic procedures. Not available in the USA, Canada, and China. This publication may contain references to products that are not available in your country. Please contact us to check the availability of

The content of this publication shall not be reproduced, altered or sold for any commercial purpose without the written approval of Shimadzu. Company names, products/service names and logos used in this publication are trademarks and trade names of Shimadzu Corporation, its subsidiaries or its affiliates, whether or not they are used with trademark symbol "TM" or "®". Third-party trademarks and trade names may be used in this publication to refer to either the entities or their products/services, whether or not they are used with trademark symbol "TM" or "®".

Shimadzu disclaims any proprietary interest in trademarks and trade names other than its own.

The information contained herein is provided to you "as is" without warranty of any kind including without limitation warranties as to its accuracy or completeness. Shimadzu does not assume any responsibility or liability for any damage, whether direct or indirect, relating to the use of this publication. This publication is based upon the information available to Shimadzu on or before the date of publication, and subject to change without notice.

Related Solutions

HydrocarbonProcessing Industry (Petrochemical, Ch

> Price Inquiry

> Product Inquiry

> Technical Service / Support Inquiry

> Other Inquiry