Forensics

Arson Accelerants

DPS Instruments, Inc.

www.dps-instruments.com

An accelerant is a fuel that causes a fire to burn hotter, spread more quickly, or be unusually difficult to extinguish. Investigators can prove that a fire was set intentionally by finding an accelerant, such as gasoline, kerosene, turpentine, or diesel fuel at the scene of a fire. Various techniques such as DFLEX strips, headspace concentration, or sample extraction can be used to detect accelerants at a fire scene. Although the sampling techniques vary the DPS Arson Accelerants GC Systems are configured for multiple sampling techniques. An extract can be directly injected by hand, or a debris sample can be placed in a vial and automatically heated and injected using our built-in Headspace Concentrator. In either case, a high resolution column and the sensitive FID detector quickly identify the accelerant fingerprint. The Series 600 GC is for analyses in the lab, or use the Portable Companion 1 GC Systems for analyses right where the samples are taken. The fully integrated Arson Accelerants GC Analyzer Systems are small and lightweight and all DPS systems are modular for expandability, upgrades, and easy service.

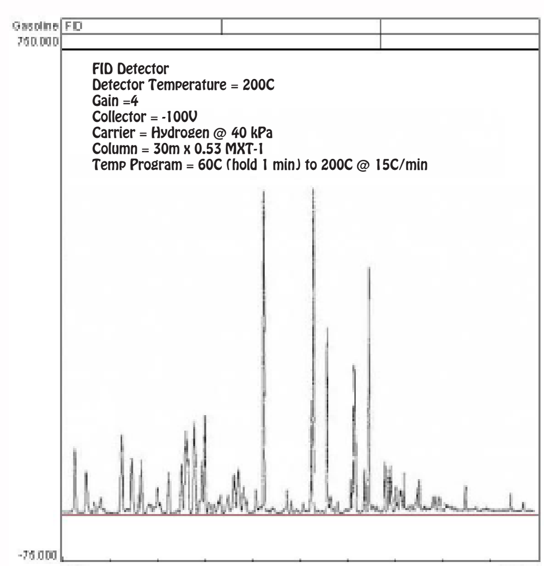
Available Configurations Include:

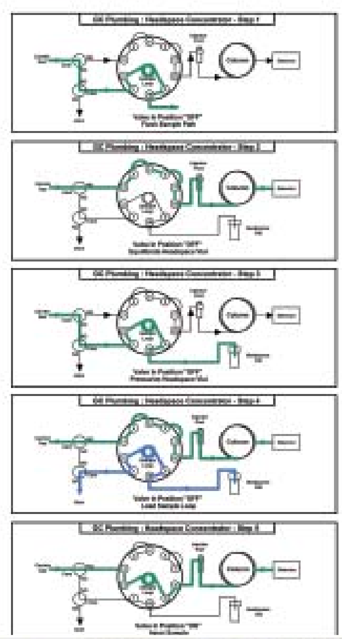
600-C-061 - Series 600 Arson Accelerants GC Analyzer (FID, Headspace, 30m)
600-C-061 - Companion 1 Portable Arson Accelerants GC Analyzer (FID, Headspace, 30m)

Series 600 GC

Companion 1 Portable GC (with Headspace

Gasoline - Headspace





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Specifications may change without notice.

Forensics

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The analysis of ethanol in blood, breath, and urine are the highest volume tests performed in forensic labs today. In the past these biological samples have been injected directly on the analytical columns causing injection port build up and column plugging. To vastly reduce the sample preparation time and GC System maintenance headaches, headspace methods have been adopted and verified. The DPS Blood Alcohol GC Systems are configured with a built-in Headspace Concentrator, the latest designed high resolution capillary column, and the sensitive FID detector to quickly detect ethanol and the other major constituents in less than 3 minutes. The Series 600 GC is for analyses in the lab, or use the Portable Companion 1 GC Systems for analyses right where the samples are taken. The fully integrated Blood Alcohol GC Analyzer Systems are small and lightweight and all DPS systems are modular for expandability, upgrades, and easy service.

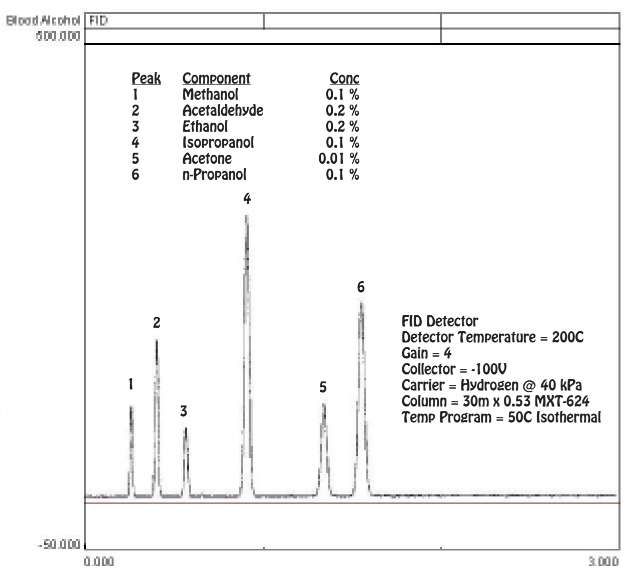
Available Configurations Include:

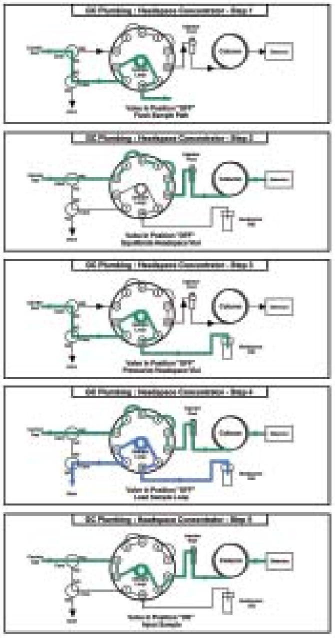
600-C-062 - Series 600 Blood Alcohol GC Analyzer (FID, Headspace, 30m)
500-C-062 - Companion 1 Portable Blood Alcohol GC Analyzer (FID, Headspace, 30m)

Series 600 GC

Companion 1 Portable GC (with Headspace Concentrator)

Blood Alcohol - Headspace





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Forensics

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Drug screening of employees is increasing around the world. Many employers have been forced to administer programs due to the high costs of drug related work incidents. Additionally, a resent study had shown that about two-thirds of patient visits to hospital emergency rooms for drug abuse would have been misdiagnosed without lab testing. Many times doctors and are not sure what patients have taken, and the same holds true for many DOA cases. The only way to determine what a patient may have taken is by drug testing. The DPS Drugs of Abuse GC Systems are configured with the latest designed high resolution capillary column and the sensitive FID detector to quickly detect these compounds. The Series 600 GC is for analyses in the lab, or use the Portable Companion 1 GC Systems for analyses right where the samples are taken. The fast heating and rapid cooling column oven in every DPS GC vastly increases your sample throughput. The fully integrated Drugs of Abuse GC Analyzer Systems are small and lightweight and all DPS systems are modular for expandability, upgrades, and easy service.

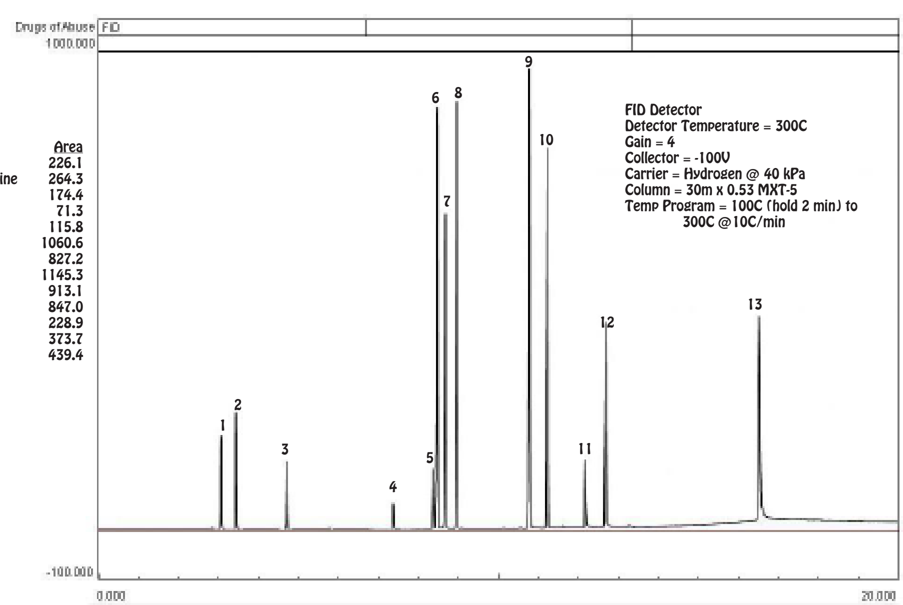
Available Configurations Include:

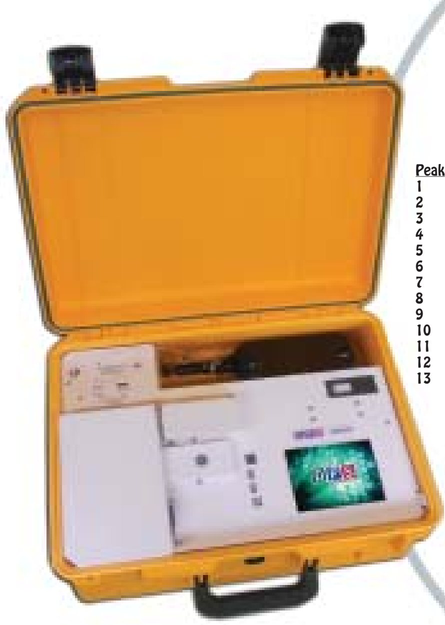
600-C-063 - Series 600 Drugs of Abuse GC Analyzer (FID, 30m)
500-C-063 - Companion 1 Portable Drugs of Abuse GC Analyzer (FID, 30m)

Series 600 GC

Drugs of Abuse

Peak	Component	Area
1	Amphetamine	226.1
2	Methamphetamine	264.3
3	Nicotine	174.4
4	Cotinine	71.3
5	Caffeine	115.8
6	Benzphetamine	1060.6
7	Ketamine	827.2
8	Phenylcyclidine	1145.3
9	Methadone	913.1
10	Cocaine	847.0
11	Codeine	228.9
12	Scopolamine	373.7
13	Alprazolam	439.4





Companion 1 Portable GC

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Forensics

www.dps-instruments.com

There are more than 1000 ordinary household products that may be abused via inhalation, such as hair spray, glue/adhesives, gasoline, paint, solvents, marker pens, correction fluid, butane lighter fluid, propane gas, cooking sprays, and household cleaners. These products are easy to obtain, inexpensive, and contain volatile substances that the user perceives as being free of toxic components. The availability and low cost of these products make them more accessible to children than tobacco, alcohol, or drugs. Consequently, inhalant abuse is on the rise, especially among young people. The DPS Inhalants GC Systems are configured with the latest designed high resolution column and the sensitive FID detector to quickly detect these compounds. The Series 600 GC is for analyses in the lab, or use the Portable Companion 1 GC System for analyses right where the samples are taken. The fast heating and rapid cooling column oven in every DPS GC vastly increases your sample throughput. The fully integrated Inhalants GC Analyzer Systems are small and lightweight and all DPS systems are modular for expandability, upgrades, and easy service.

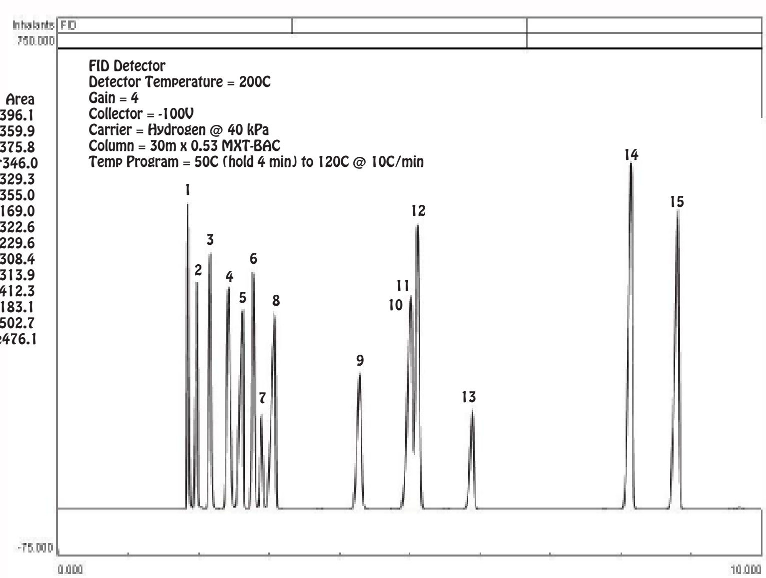
Available Configurations Include:

600-C-064 - Series 600 Inhalants GC Analyzer (FID, 30m)
500-C-064 - Companion 1 Portable Inhalants GC Analyzer (FID, 30m)

Series 600 GC

Inhalants of Abuse

Peak	Component	Area
1	Diethyl Ether	396.1
2	Methanol	359.9
3	Hexane	375.8
4	Methyl-tert-Butyl Ether	346.0
5	Ethanol	329.3
6	Acetone	355.0
7	Methylene Chloride	169.0
8	Isopropanol	322.6
9	Ethyl Acetate	229.6
10	Chloroform	308.4
11	Methyl Ethyl Ketone	313.9
12	Benzene	412.3
13	Trichloroethylene	183.1
14	Toluene	502.7
15	Methyl Isobutyl Ketone	476.1



Companion 1 Portable GC

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Forensics

This broader group of organic solvents contains many of the compounds identified by the more specifically configured Blood Alcohol and Inhalants GC Systems. These solvents can be major components, or impurities in household cleaners, paints, glues, and many other readily available products, as well as solvents found in biological fluids. Since you are not quite sure what you are going to find, or what concentration it may be, we have configured the DPS Forensic Solvents GC Systems with the highest resolution general purpose column available and the sensitive FID detector. The Series 600 GC is for analyses in the lab, or use the Portable Companion 1 GC Systems for analyses right where the samples are taken. The fast heating and rapid cooling column oven in every DPS GC vastly increases your sample throughput. The fully integrated Forensic Solvents GC Analyzer Systems are small and lightweight and all DPS systems are modular for expandability, upgrades, and easy service.

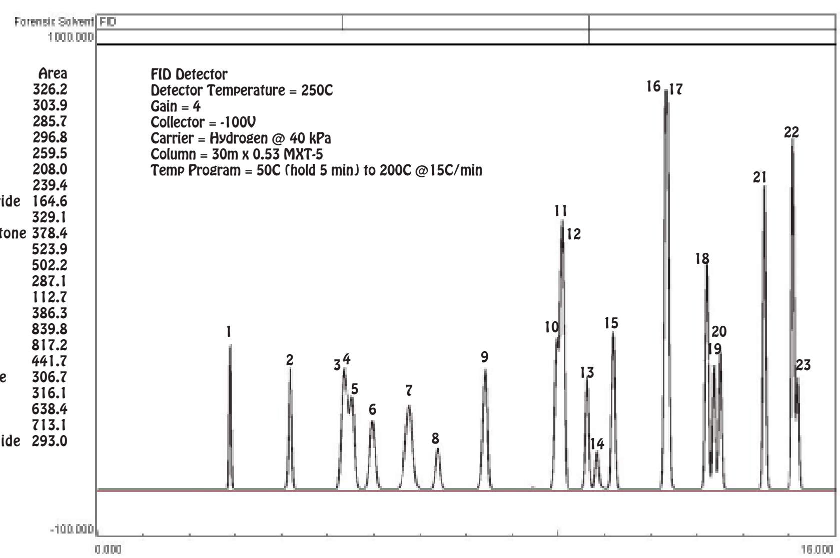
Available Configurations Include:

600-C-065 - Series 600 Forensic Solvents GC Analyzer (FID, 30m)
500-C-065 - Companion 1 Portable Forensic Solvents GC Analyzer (FID, 30m)

Series 600 GC

Forensic Solvents

Peak	Component	Area
1	Methanol	326.2
2	Ethanol	303.9
3	Acetone	285.7
4	Acetonitrile	296.8
5	Isopropanol	259.5
6	Ether	208.0
7	tert-Butanol	239.4
8	Methylene Chloride	164.6
9	n-Propanol	329.1
10	Methyl Ethyl Ketone	378.4
11	sec-Butanol	523.9
12	Hexane	502.2
13	Ethyl Acetate	287.1
14	Chloroform	112.7
15	Tetrahydrofuran	386.3
16	Benzene	839.8
17	Cyclohexane	817.2
18	Heptane	441.7
19	Trichloroethylene	306.7
20	1,4-Dioxane	316.1
21	Pyridine	638.4
22	Toluene	713.1
23	Dimethylformamide	293.0



Companion 1 Portable GC

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Forensics

Anesthetics

DPS Instruments, Inc.

www.dps-instruments.com

Government agencies generally recommend that no worker should be exposed to concentrations greater than 2ppm of any halogenated anesthetic agent over a period of time. There are no documented adverse effects of chronic exposure to Waste Anesthetic Gases (WAG's) in the workplace. Although results of some studies suggest a link between exposures to halogenated anesthetics and increased health problems. Precautions include adequate ventilation in the operating room, a scavenging system, and work practices to minimize leaks. The DPS Anesthetics GC Systems are designed with safety in mind to check the purity of the concentrated anesthetic, monitor workplace concentrations, or analyze sample concentrations during anesthesia. The latest designed high resolution column and the sensitive FID detector does the hard work for you. We have added a built-in Headspace Concentrator for your convenience. The Series 600 GC is for analyses in the lab, or use the Portable Companion 1 GC Systems for analyses right where the samples are taken. The fast heating and rapid cooling column oven in every DPS GC vastly increases your sample throughput. The fully integrated Anesthetic GC Analyzer Systems are small and lightweight and all DPS systems are modular for expandability, upgrades, and easy service.

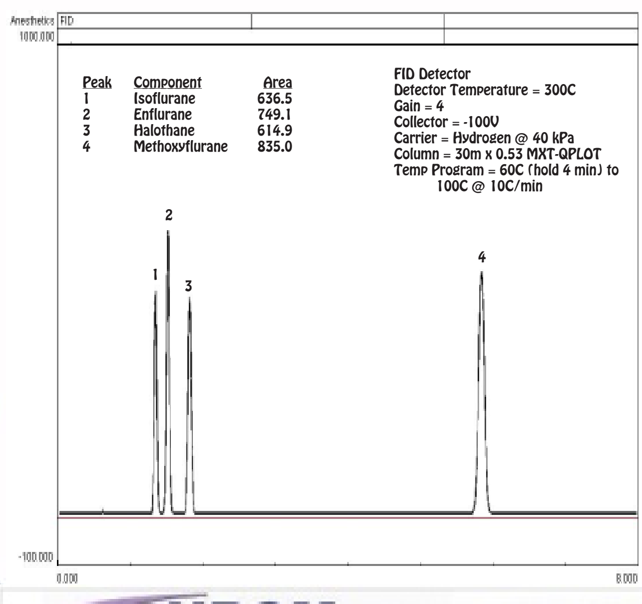
Available Configurations Include:

600-C-060 - Series 600 Anesthetics GC Analyzer (FID, Headspace, 30m)
500-C-060 - Companion 1 Portable Anesthetics GC Analyzer (FID, Headspace, 30m)

Series 600 GC

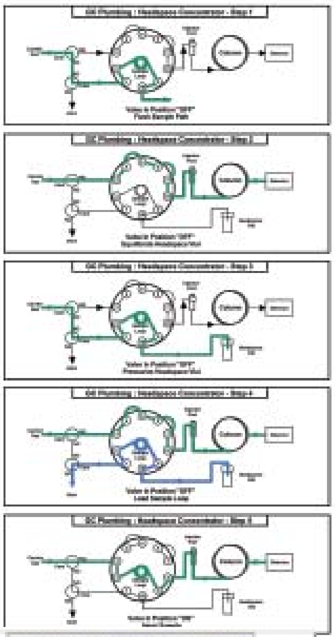
Companion 1 Portable GC (with Headspace Concentrator)

Anesthetics - Headspace



Peak	Component	Area
1	Isoflurane	636.5
2	Enflurane	749.1
3	Halothane	614.9
4	Methoxyflurane	835.0

FID Detector
Detector Temperature = 300C
Gain = 4
Collector = -100V
Carrier = Hydrogen @ 40 kPa
Column = 30m x 0.53 MXT-QPLOT
Temp Program = 60C (hold 4 min) to 100C @ 10C/min



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