

## SeaPORT Mini GC, Model 510-TC-A

The SeaPORT Mini GC is a portable instrument for separating, analyzing, and identifying substances contained in a volatile liquid or gaseous sample.



### SeaPORT Mini GC features

- The maximum temperature of the column is 160°C, offering more flexibility in designing temperature profiles.
- The **MCCD** MEMS chip sensor can be set at either of two levels of sensitivity.
- Standard sensitivity mode works well for polar compounds such as: ketones, alcohols, and esters.
- High sensitivity mode works well for compounds such as halogenated alkanes and substituted aromatics, as well as mixtures with one or more compound of low concentration.

### Use room air as the carrier gas

Developed by Seacoast Science, the SeaPORT Mini GC uses an efficient, software-controlled internal pump system. This design allows our SeaPORT Mini GC to use room air as the carrier gas.

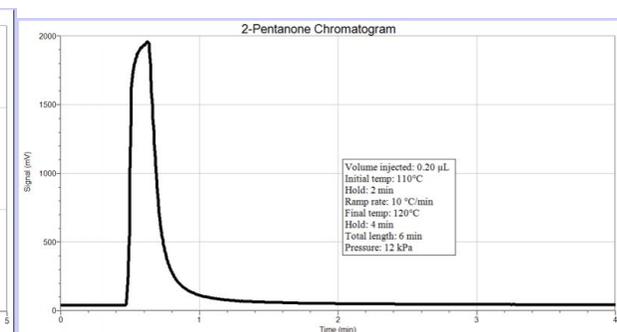
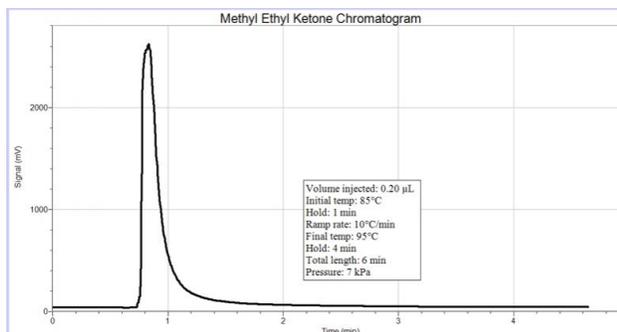
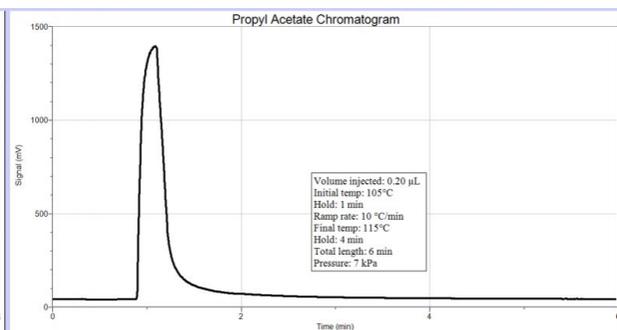
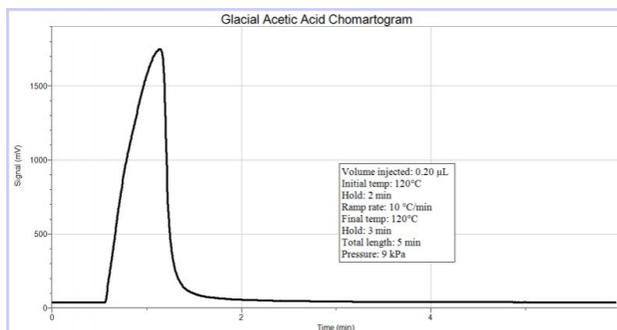
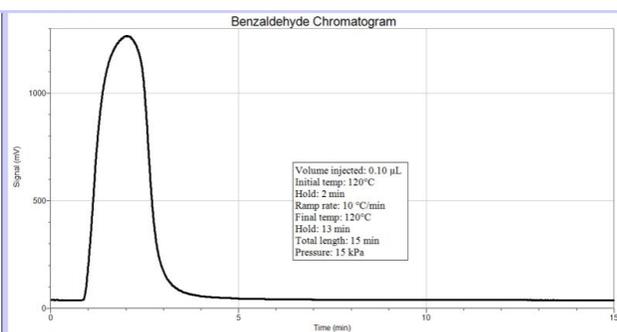
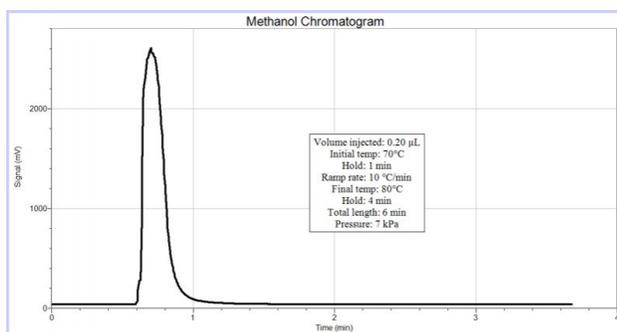
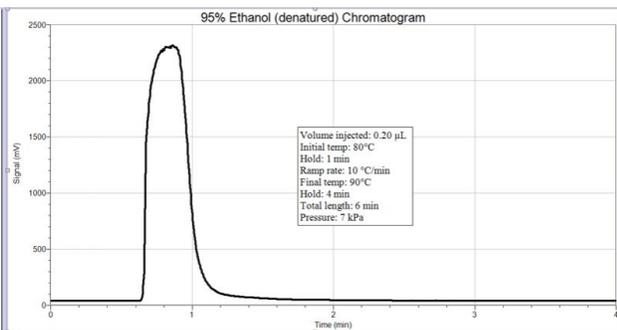
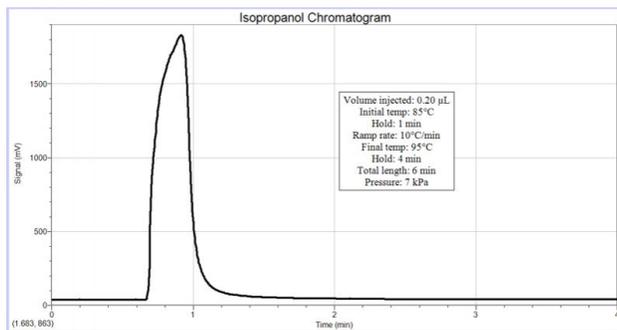
### The system is controlled by Vernier's award-winning software for column control, collection, and peak integration

With an easy USB 2.0 Connection to your Windows™ PC the Vernier's Logger *Pro* software allows total control of your run. It also provides peak integration analysis and retention-time determination.

### Classes of compounds that can be used in SeaPORT Mini GC

COMPOUND TYPE	TYPICAL COMPOUNDS	RANGE OF ACCEPTABLE BOILING POINTS
Alcohols	C1 – C6	50 – 175°C
Aldehydes	C1 – C8	50 – 175°C
Amides	C3 – C4	150 – 250°C
Aromatic hydrocarbons	C6 – C12	100 – 150°C
Carboxylic Acids	C1 – C4	100 – 150°C
Esters	C2 – C10	30 – 200°C
Ethers	C2 – C8	30 – 110°C
Heterocycles	C5 – C8	100 – 150°C
Halogenated hydrocarbons	C1 – C8	30 – 120°C
Ketones	C3 – C8	50 – 175°C
Nitriles	C2 – C5	50 – 120°C
Nitroalkane/aromatic	C1 – C6	100 – 210°C
Phosphonates	C3 – C9	180 – 210°C
Sulfides	C4 – C8	90 – 150°C

# Sample Graphs from Mini GC





## SeaPORT MINI GC Product Specifications

### MCCD Detector

The unique Seacoast Science MEMS Chemi-Capacitive Detector is state-of-the-art technology that allows air to be used as a carrier gas (patents pending).

The MEMS chip sensor can be set at either of two levels of sensitivity.

- Standard sensitivity mode works well for polar compounds such as: ketones, alcohols, and esters.
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### Carrier Gas

Use room air as the carrier gas.

### Column

High-quality Restek MXT-1 Stainless (11 meter) capillary column.

### Pressure Regulation

Software-controlled pressure regulation from 1–21 kPa above ambient.

### Temperature Regulation

Software-controlled temperature regulation from 30–160°C

### Column Temperature Ramp

- Maximum of 10°C/minute.
- Short Warm-up time: Fast for most labs, <10 minute max

### Injection

- Comes with one high-quality 1 $\mu$ L glass syringe, 2-7/8 inch stainless needle with non-coring beveled tip and needle guard, 1.5 inch injectable length.
- Injection is direct from syringe to column
- 2 septa included with purchase (~150 injections/septum)
- Injection volume: 0.01 to 1.0  $\mu$ L

### Power Requirements

- External cord connected power supply rated 100-240V AC, 50-60Hz, 1.5 A

### Warranty

One-year warranty. Syringe, column, and MEMS GC chip are excluded.

### Size

- 1.3 kg
- 10.8 cm x 13.3 cm x 19.1 cm

## System Control and Readout

You will need to install Vernier's Logger *Pro* 3 on an existing computer -- a notebook or a desktop PC. Logger *Pro* 3 software for Windows or MAC OS and is provided with each MINI GC system.

## What's Included

- SeaPORT Mini GC unit
- Logger Pro Software from Vernier Software and Technology
- AC power adapter
- Hamilton Syringe (1.0  $\mu$ L volume)
- Two extra septa (a third septum is already installed)
- USB cable
- Lab manual: *Gas Chromatography Investigations with the Mini GC™*
- Carrying case

## Software Requirements

System recommendations for Logger Pro 3.8.6.1, (released May 1, 2013)

Windows:

- Windows® XP SP2/SP3, Vista SP2, Vista 64 SP2, Windows 7 (32 or 64), or Windows 8.
- Pentium® processor or equivalent running at 500 MHz or faster
- 512 MB total minimum RAM
- 200 MB of hard disk space for a minimum installation
- Available USB or serial port.

Mac:

- Macintosh OS® OS X 10.6, 10.7, or 10.8
- 512 MB RAM
- 200 MB of hard disk space for a minimum installation
- Available USB port

**For More Information please visit**

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