

TechTIPs

The latest from PerkinElmer Photovac

Volume 6, Number 1



Voyager Portable GC Operational Reference Guide

INTRODUCTION

The purpose of this TechTIP is to serve as a reference guide for day-to-day operation of the Voyager Portable Gas Chromatograph. For more detailed information on any step, please refer to the Voyager User's Manual.

The Voyager can be operated from the instrument keypad or from the associated PC software called SiteChart LX. PerkinElmer Photovac has found that Voyager users prefer to set up an analysis method and calibrate the instrument using the SiteChart software. Once calibrated, the choice of operational mode (key pad or software) depends on sampling location. If power is available or samples are brought to the instrument, users continue to run the Voyager from SiteChart; and for field sampling applications, analysis runs are generally done from the keypad.

INSTRUMENTATION SETUP

1. Prior to instrument operation, fill the internal cylinder with carrier gas (ultra pure air or nitrogen; consult your assay notes for details) or connect the instrument to an external supply of carrier gas
2. Ensure the battery is charged or that the instrument is connected to the AC adapter.
3. Press the Instrument **On/Off** Key to turn on the Voyager. The software version and copyright notice will be displayed.
4. Review the instrument status by hitting the **Enter/Menu** key, then **Display**, then **Status**. Use the up and down arrow keys to scroll through the status information. Several of the key status parameters are as follows:

PID Signal	~ 2 mV (if in high sensitivity mode) ~ 200 mV (if in low sensitivity mode)
PID Offset	~ 300 – 800 mV (if in high sensitivity mode) ~ 2 mV (if in low sensitivity mode)
PID UV Int.	~ 300 – 800 mV
PID Status	ON

Note: If the Voyager PID parameters are not as specified above, do not continue with analyses.

VOYAGER SETUP FROM SITECHART

1. Open the SiteChart software

2. Open the appropriate Assay file (*.App)
 - Click on **Assay Tab** in SiteChart
 - Go to **File, Open**
 - Find the Assay file in appropriate directory: c:\program files\sitechart\data\voyager serial#\ *methodname.app*

Note: The factory-developed assay will initially need to be loaded from the disk shipped with the instrument.

3. Connect Voyager to serial port on the computer with the RS232 communication cable
4. Verify communication between Voyager and computer
 - Go to **Instrument Tab** in SiteChart, bottom right button will say “start”, not “start/stop” and status information will continuously update if communication is established
 - If communication is not established, check **Communications, Setup, Port**
5. Define Assay Parameters for the Column
 - Go to **Assay Tab** in SiteChart
 - Select **Column/Detector** (e.g. A-PID); then click on the **Config** button
 - Verify detector is enabled. The ECD and/or PID state will be *disabled* if detector is off or *low/high sensitivity* if detector is on
 - Verify Sampling method (loop or syringe). Click the **Inject** button; ensure desired sampling mode is selected; either loop or syringe
 - Click **O.K.** to leave config mode
 - Verify Compound information in the library. Highlight each compound folder in the library list and ensure:
 - Cal Compound** box is checked
 - Cal Concentration** value is entered correctly

Note: Check Cal Compound box ONLY if compound is contained in the calibration gas

6. When assay parameters have been verified, send assay information to the Voyager
 - Click on **Send to Voyager** button

TO RUN A BLANK SAMPLE

1. Go to **Instrument Tab** in SiteChart
2. Confirm desired column is selected. Go to **Analyze, Column**, then click on desired column (yellow line of instrument diagram should lead to desired column)
3. Set tag. Go to **Analyze, Setup**; type tag
4. Click **Start** button

Note: Ambient air will be drawn in for a “blank” loop sample or an air blank injection can be done to simulate a clean headspace injection

TO RUN CALIBRATION STANDARDS

1. Set tag using **Analyze, Setup** and type in tag name

2. Attach prepare bag sample of calibration gas or prepare the syringe injection
3. Click **Start** button
4. After run is complete, click **Analyze, Calibrate**

Note: Green checks will appear next to each calibrated compound

Each column must be calibrated separately. The instrument is now ready to run samples either through SiteChart or from the keypad.

SAMPLE ANALYSES FROM SITECHART

1. Go to **Instrument Tab** in SiteChart
2. Select appropriate column; **Analyze, Column**
3. Set tag; **Analyze, Setup** and type in tag name
4. Click **Start**

SAMPLE ANALYSES FROM KEY PAD

1. Select appropriate column
2. Set tag
3. Click **Start/Stop** key

Note: When running samples from the Voyager alone, data is stored in the Voyager's memory until reconnected to Sitechart. Data then automatically downloads into SiteChart.

For further information contact your area representative or the nearest Photovac office:

United States/International
PerkinElmer Photovac
761 Main Avenue
Norwalk, CT 06859-0211
203-761-5330

Europe
Photovac Europa
Sjælsø Allé 7A, P.O. Box 79
DK-3450 Allerød, Denmark
+ 45-48 100 400