



Autosamplers

CTC, PAL Autosampler Trays

Evacuation Chambers

Motorized Valves and Manifolds

BandoleroTM compact high-capacity autosampler For

the price of one PALTM autosampler (or Shimadzu AOC 6000, Gerstel MPS) you can buy a dozen BandoleroTM autosamplers. Use one BandoleroTM in the lab on the GC and use the other BandoleroTM autosamplers in the field for automated sample collection 24/7.

The Lab BandoleroTM can be mounted vertically for headspace sampling

The Field BandoleroTM compact and light weight, includes a sampling pump and valve for gas or liquid. The Lab and Field BandoleroTM use the same belts.

The Universal BandoleroTM can be used in the lab on the GC and in the field to collect samples. It includes a built in sampling pump and valves. Use it in the lab for analysis, use it in the field to collect samples. Get several for in the field at a discount.

The X10TM Autosampler uses trays that can accommodate other size vials. It can be used in the lab on the GC and in the field to collect samples. Ultra light X10s are built with Carbon Composites for use on aerial drones to sample plumes.

The BandoleroTM Syringe Pump can be used in most circumstances with the Autosampler for GC injections. In the field, it can be used for sampling liquids and gases.

Bandolero TM Universal Autosampler	\$5000
Bandolero TM GC Autosampler	\$4995
Bandolero TM Field Autosampler.....	\$2495
X10 GC Autosampler.....	\$1500
X10 Field Autosampler.....	\$1000
Bandolero TM belts	\$65
X10 trays.....	\$65



(continued on page 2)

Perfect flushing between samples means there is absolutely no carryover. Minimal amount of sample is used leaving enough sample for do-overs and other analysis (e.g. stable isotope analysis). Belts can hold hundreds of samples. It is not just for Exetainers! Automated sampling of gas bags flasks and bottles is easy with the Bandolero! Large sample containers can be used with the Bandolero™ to collect in the field and analyze in the lab. The Bandolero™ can be connect to the GC directly to an experiment in the lab without additional multiplexing valves.

In 10 minutes you can set it up a Bandolero™ and start running samples. It does not require a trained technician to set up and run. There is no 'installation' to do. There is no programming to do. There is no routine maintenance required. You will never change another GC septum! It is configured to work with all major brands of Gas Chromatograph and can be customized for other tubes up to 50ml. It can also be used to automate sampling in the field. For 2017 I am introducing a dedicated field sampling model of the Bandolero™. One Field Autosampler can connect to 6 sampling locations through a multiplex valve system. It is small and light so it is easy to ship anywhere in the world.

Compare Bandolero™ with PAL™ installation and maintenance:

Bandolero™ : Just plug it in and start using it

Bandolero™ : < \$5000

PAL™ : Assemble it, install software, program movements. (60 page User Guide)

PAL™ : Replace GC septa, replace syringes, replace bungee cords

PAL™ : Requires a trained technician

PAL™ : > \$30,000

For the price of a PAL™ you can buy a dozen Bandolero™ autosamplers. Use the Lab Bandolero™ on the GC and use the Field Bandoleros™ for automated sample collection 24/7.

Typical use: sampling Exetainers or Vacutainers for a GC (Shimadzu, Agilent, SRI, VICI).

\$1000 Autosampler

This autosampler has a capacity of 10 samples and costs under \$1000. Trays hold 10 Exetainers or similar vial. You don't need a trained technician to set it up and run. You will no longer be a slave to your GC for manual injections. It will free you to get on with productive work. For use on a GC in the lab or to collect samples in the field, holds 10 tubes

X10 Au-

extra trays.....\$65



tosampler.....\$995

Trays for Exetainers (PAL, PAL3, CTC, Leap, AOC), holds 50 tubes

Tray: Specify PAL or PAL3, Specify 6ml or 12ml Exetainers\$224

Lock-Down Lid for 50 tube Trays.....\$49



Computer Controlled Motorized Valves

interface and behavior of the valves can be customized.

Manifold 12 port Rotary Selection Valve: Multiplex 12 sources to one autosampler.

Use one instrument or autosampler with 12 sources. 12 ports in and 1 port out\$995

Rotary 4 way Valve: bypass flow to a sensor or sampler.....\$395

6 Pinch Valve module: **Multiplex sampling or whatever. Daisy chain for 12, 18, 24 etc.**

Use one instrument or autosampler with 6 or more sources. Power and control can be daisy chained through several units.

It can be configured for several sizes of tubing

Modular valve for 6 tubes\$595

Exevacuatorr™ chamber for evacuating Exetainers™ [Youtube Video](#)

This is the only way to completely evacuate screw cap Exetainers™. This eliminate leaks and extend shelf life. Achieve higher vacuum in less time. The Exetainer™ is put in the vacuum chamber and evacuated with it's cap loose then the cap is sealed tight while still in the vacuum. This is the only way you can evacuate screw cap Exetainers™ without puncturing the septum with a needle. Works with 12ml and 6ml Exetainers™

7 tube Exevacuatorr™



Chamber.....\$395

Manifold 10 port vacuum valve: 1 valve open/closes all 10 channels.

Use for evacuating/purging vials using hypodermic needles

10 tube Manifold valve with 10 ports\$195

Evacuation Chamber for Crimp-Cap vials up to 4" tall (including Exetainers)

Use stoppers that have legs. The legs hold the stopper in place without sealing it while it is evacuated. The stopper is pushed closed when evacuation is achieved. This type of stopper is commonly used for lyophilization. In fact this chamber can be used for lyophilizing material in vials and then sealing the vial under vacuum. Fits 12ml and 5.9ml Exetainers

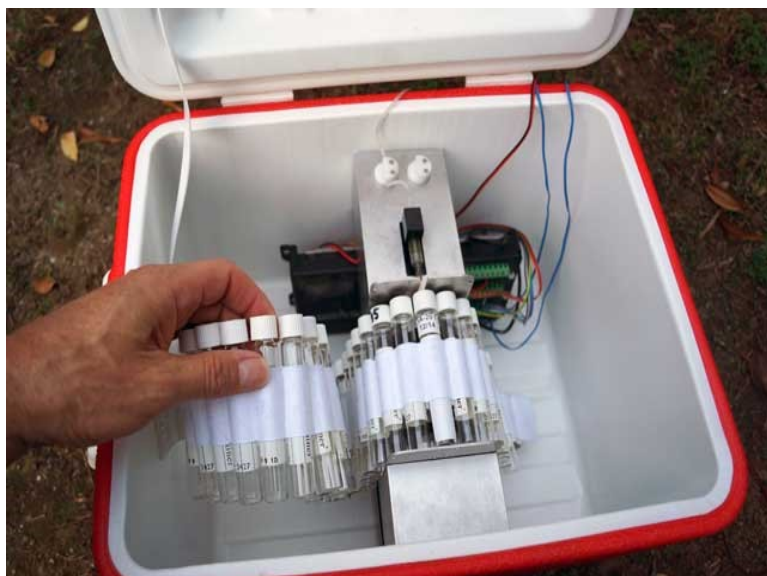
Crimp Exevacuator™ Chamber.....\$195

Evacuation / Lyophilization Chamber for Crimp Cap Vials.....\$295

use split stoppers (e.g. Wheaton W224100-408 Bromobutyl septa). Look at the Labconco Mini Stoppering Chamber on Youtube to get an idea how these work



Bandolero™ can be used in the field



High capacity, compact, low power consumption. A small cooler can hold the Bandolero, data logger, battery, and a hundred or more vials.

Bandolero™ autosampler mounted in the passenger seat of a Long-EZ aircraft for landscape scale sampling and plume sampling.

Automated Soil Gas Flux Samplers, send an [email](#). Let me know your needs.

Old style manifold: Obsolete! I hope you are not still using one of these!



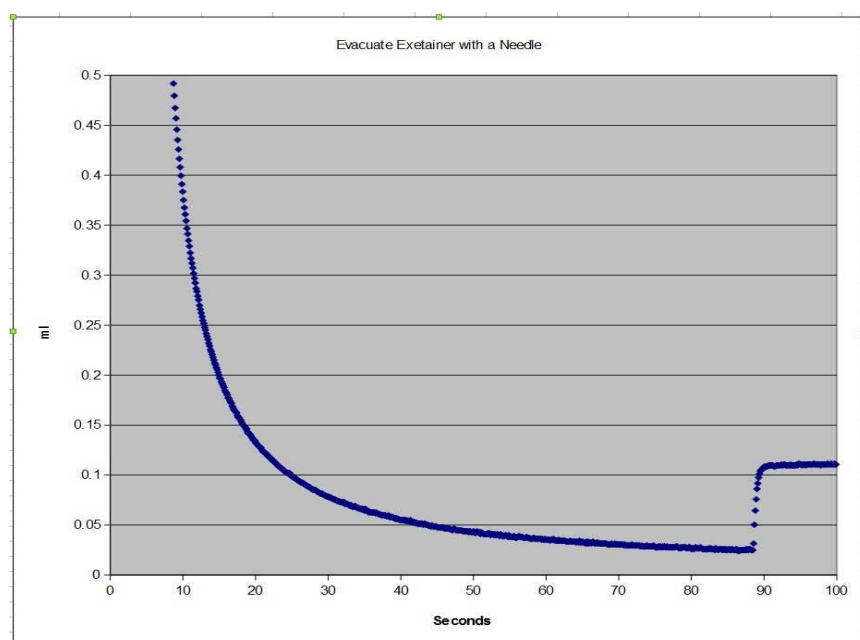
Bandolero 2019 *Prices are USD List* ***XYZTech***

The Bandolero is the only Autosampler you can put in the field. The Bandolero 2017 is half the size of the Bandolero Classic. It fits in a small cooler along with batteries and data logger for automated sample and data collection in the field. It can then be brought into the lab and used to run the samples on the gas chromatograph



The "Undercap Unfiller" is a chamber that evacuates Exetainers without puncturing the septum. The vial is evacuated with the cap loose then the cap is tightened while still in the vacuum chamber. Vials are evacuated in seconds instead of minutes as with using a needle. You can use a nut driver or similar tool to tighten the caps to save wear and tear on your fingers

If you use a needle to evacuate vials, some of the vacuum is lost when you pull the needle out of the septum! Air leaks in as you pull the needle out. This one used a special septum I developed so the leak is small. If you tried to do this with a normal septum, the leak would be off the chart!



R&D

New Products:

Ultralight Bandolero: compact and light weight for sampling in the field. It can be carried by a drone for plume sampling.

Evacuation System for Exetainers that does not puncture the septa. No needles! Achieves high vacuum and eliminate leaks. Extends the shelf life of evacuated vials. This method is Faster because you don't have to wait for the air to drain out of the Exetainer through a needle.

Sampling without pre-evacuated vials eliminates a lot of problems, produces pure samples.

Multiplex valves for gas sampling, increases

Problems Solved

Automated gas sampling with large flasks or bags is easy with the Bandolero™!

With a flask sampling belt adapter, a crate full of flasks can be sampled. No valves are involved: there is a straight path from the needle to the flask. Flasks and gas bags can be filled in the field and can be sampled to a GC in the lab. Incubation experiments in the lab can be connected directly to the GC or other instrument through a Bandolero™.

Automated sampling in the field is simple.

Sampling is simplified with a syringe pump to collect gas or liquid samples in the field and for some methods injecting a GC in the lab using the Bandolero™.

Incomplete vial evacuation is a problem in most labs.

If you think your Exetainers™ are evacuated, then you better test some of Your tubes: hold an "evacuated" vial upside down underwater and remove the cap. If it were evacuated it would fill completely with water. The bubble shows you how much air was in the "evacuated" vial. The photo below shows how much air was in these evacuated vials. The 4 vials in the middle were "pre-evacuated" vials purchased directly from Labco! "Lab B" results were from evacuating through a needle. The Exevacuatorr Chamber solves this problem and gives results like "Lab A" on the left.

small bubble: good

