

Sample Preparation



Sample Preparation

Sample preparation refers to the ways in which a sample is treated prior to its analysis. The products presented in the brochure are ideal for several methods and eliminate the manual process of preparation by a mechanical device to produce the best sample possible.

Glas-Col's Digital Pulse Mixer:

- Performs high or low speed mixing (orbital)
- Repeatable mixing results

DPM can be used in the following applications:

Our mixers are affordable and can be automated or customized for any vessel. Applications include solution phase synthesis when a good mixture of heterogeneous solutions is needed. In Solid Phase chemistry the pulsation feature is extremely useful for the full reaction of resins, and other materials. In cell culture Glas-Col's density in one plate is equivalent to four plates from other manufacturers. In the **QuEChERS** procedure, our systems are well adapted for the various vials associated with this method.

- Volumetric flask
- 96-well plates
- Tests tubes racks
- Combinatorial reaction blocks
- Micro reactors
- Cryogenic tubes
- Most any type of mixing application
- **Quick Easy Cheap Effective Rugged Safe:** analysis of multiple pesticide residues in fruit, vegetables, cereals and processed products.

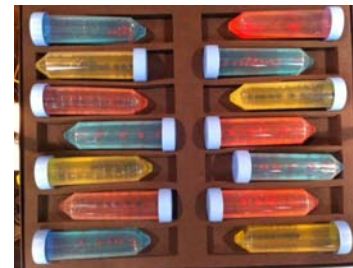


Digital Pulse Mixer Shown with Laydown pad & R80 1039 Top

Sample Preparation

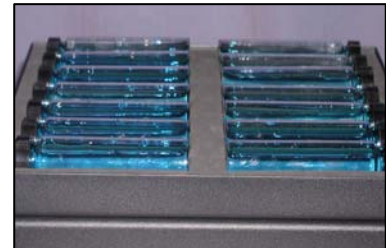
The Digital Pulse Mixer has the following features:

- Micro-processor based control technology, for control of DC brushless motors
- Speed 150 to 1500 rpm, Speed Display Resolution: 1.0 RPM, Speed Setting Increment: 10 RPM
- 4-line back-lit LCD display
- Offset 0.070"
- Built-in digital timer (seconds: 1-60, minutes 1-60, hours 1-24)
- Preset run times of 30, 60, 90 and 120 seconds
- User selectable pulse profile (Pulses-per-minute: 1-100), Ppm-duty-cycle: 1-99 %
- Timer and Pulse mode may be combined for timed-pulse mode
- Communication port (USB)
- User-friendly membrane switch interface (4-button)
- Optional software for real time data acquisition, Labnetix



Specifications:

Size:	16"w x 18"d x 9" h (to top of drive plate)
Platform size:	11-5/8" x 14-1/4"
Voltage:	120 or 240-volt models
Mixer mounts:	Vibration absorbing for minimum transfer to lab bench
On/Off switch:	Located on front of unit



Catalog Number	Description	Input	RPM
099A DPM12	Mixer base Digital	120V	150-1500
099A DPM24	Mixer base Digital	240V	150-1500
099A LC1012	Mixer base Analog	120V	100-2000
099A LC1024	Mixer base Analog	240V	100-2000
099A VC4014	½ foam pad for (14) 40ml EPA vials for Digital/	N/A	N/A
099A VC6014	½ foam pad for (14) 60ml EPA vials/50ml centrifuge for Digital/Analog base	N/A	N/A
R80 1039	Hold down top with viewing window for vials, fits DPM and LC models	N/A	N/A

Sample Preparation

Both the VB4 and LC mixers are ideal systems for sample preparation work. These are economical systems for handling multiple samples with analog type control for both speed and pulse operation. They both can perform low and high speed operation to maximize preparation work. Applications include test tubes, well plates, Eppendorf tubes, PCR based assays, mixing high viscous liquids, resuspension of cells, mixing reagents, etc. The height of the vortex is related to the speed setting. Your specific application will require determining the correct speed, time or pulse settings for the best homogeneous mixture.



VB4



Catalog Number	Description	Input Voltage	RPM	Product Weight (lbs)
099A VB4	Vortexer base with two cartridges	120	100-2,000	38
099A VB424	Vortexer base with two cartridges	240	100-2,000	38
099A LC1012	Vortexer base Analog	120	100-2,000	55
099A LC1024	Vortexer base Analog	240	100-2,000	55

The LC model has also been used by many customers in reference to drinking water analysis for the following EPA methods:

- 505 Analysis of PCB**
- 515.3 Determination of chlorinated acids in drinking water**
- 552 Determination of haloacetic acids in drinking water**
- 551.1 Determination of pesticides/herbicides in drinking water**



LC

Sample Preparation

The FlexiVap™ Work Station is ideal for drying solvents or water. The key advantages are:

- One manifold suits all standard size vials
- Easy closure of any manifold position
- Reduced nitrogen consumption
- Complete even flow rates in all ports
- Cost effective compared with existing models on the market.

They are low cost, small footprint instruments used to concentrate chemical and biochemical solutions for further analysis, or evaporate to dryness for further reactions. What makes these systems unique is the ability to open or close each position by turning the knobs on the manifold and the rack and pinion precision lab stand. Digital temperature control to 100° C is available on certain models.



Catalog Number	Description	Input Voltage	Max PSI	Product Weight (lbs)
109A YH-1*	FlexiVap Work Station, no heating for small insert, 24 positions with flowmeter.	N/A	50	15
109A YH-2*	FlexiVap Work Station, no heating for larger insert, 48 positions with flowmeter.	N/A	50	15
109A YH-1-12*	FlexiVap Work Station with heating for small insert, 24 positions with flowmeter.	120	50	20
109A YH-2-12*	FlexiVap Work Station with heating for larger insert, 48 positions with flowmeter.	120	50	25
109A YH-1-24*	FlexiVap Work Station with heating for small insert, 24 positions with flowmeter.	240	50	20
109A YH-2-24*	FlexiVap Work Station with heating for larger insert, 48 positions with flowmeter.	240	50	25
109A YH-4812	Aluminum Insert Block with 48 positions for up to 12 mm vials (Use with large system)	N/A	N/A	3
109A YH-4815	Aluminum Insert Block with 48 positions for 15 mm to 16mm vials (Use with large system)	N/A	N/A	3
109A YH-4816-15	Aluminum Insert Block with 48 positions for 15ml Centrifuge tubes (Use with large system)	N/A	N/A	3
109A YH-4828	Aluminum Insert Block with 24 positions for up to 28mm vials, EPA (Use with large system)	N/A	N/A	3
109A YH-4829-50	Aluminum Insert Block with 24 positions for 50ml Centrifuge tubes (Use with large system)	N/A	N/A	3
109A YH-2412	Aluminum Insert Block with 24 positions for up to 12mm vials (Use with small system)	N/A	N/A	2
109A YH-2416	Aluminum Insert Block with 24 positions for 15mm to 16mm vials (Use with small system)	N/A	N/A	2
109A YH-2416-15	Aluminum Insert Block with 24 positions for 15ml Centrifuge tubes (Use with small system)	N/A	N/A	4
109A YH-2428	Aluminum Insert Block with 12 positions for up to 28mm vials, EPA (Use with small system)	N/A	N/A	2
109A YH-2429-50	Aluminum Insert Block with 12 positions for 50ml Centrifuge tubes (Use with small system)	N/A	N/A	4
109A YH12	Bottom Heat plate only with digital control, 100°C Max	120	N/A	4
109A YH24	Bottom Heat plate only with digital control, 100°C Max, supplied with CEE/7 power cord	240	N/A	4

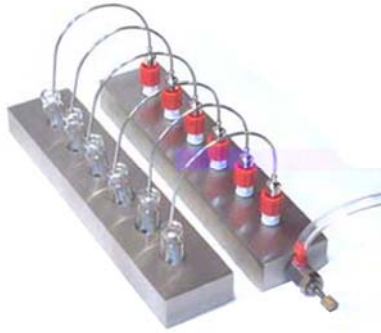
Sample Preparation

Our ZipVap® is line a of analytical nitrogen evaporators that are low cost, small footprint instruments used for solvent and water removal. These units concentrate chemical and biochemical solutions for further analysis, or evaporate to dryness for further reactions. Different ZipVap® evaporators are available for small 12 mm auto sampler vials to 62mm dia. bottles. Number of positions range from 2, 8, 12, 24, 28, 48 and 96. Temperature to 100° C.



Catalog Number	Description	Input Voltage	Max PSI	Product Weight (lbs)
109A 11-80021	Zipvap 2, 2-position evaporator for 61mm flasks, insert heated only, gas inlet not heated, with flowmeter.	120	20	8
109A 11-80025	Zipvap 2, 2-position evaporator for 61mm flasks, insert and gas inlet heated, with flowmeter.	120	20	8
109A 11-80081	Zipvap 8, 8-position evaporator for 28mm vials, insert heated only, gas inlet not heated, with flowmeter.	120	20	8
109A 11-80085	Zipvap 8, 8-position evaporator for 28mm flasks, insert and gas inlet heated, with flowmeter.	120	20	8
109A 11-80121	Zipvap 12, 12-position evaporator for 18mm vials, insert heated only, gas inlet not heated, with flowmeter.	120	20	8
109A 11-80125	Zipvap 12, 12-position evaporator for 18mm vials, insert and gas inlet heated, with flowmeter.	120	20	8
109A 11-80185	Zipvap 18, 18-position evaporator for tubes up to 25mm, insert heated only, gas inlet not heated, no flowmeter.	120	20	8
109A 11-80201	Zipvap 20, 20-position evaporator for 15mm vials, insert heated only, gas inlet not heated, with flowmeter.	120	20	8
109A 11-80205	Zipvap 20, 20-position evaporator for 15mm vials, insert and gas inlet heated, with flowmeter.	120	20	8
109A 11-80241	Zipvap 24, 24-position evaporator for 15mm vials, insert heated only, gas inlet not heated, with flowmeter.	120	20	8
109A 11-80245	Zipvap 24, 24-position evaporator for 15mm vials, insert and gas inlet heated, with flowmeter.	120	20	8
109A 11-80481	Zipvap 48, 48-position evaporator for 12mm auto sampler vials, insert heated only, gas inlet not heated, with flowmeter.	120	20	8
109A 11-80485	Zipvap 48, 48-position evaporator for 12mm auto sampler vials, insert and gas inlet heated, with flowmeter.	120	20	8
109A 11-80960	Zipvap 96, 96-position unheated evaporator for 96 well plate, with flowmeter.	N/A	N/A	4
109A 11-80961	Zipvap 96, 96-position evaporator for 96 well plate, gas inlet not heated, with flowmeter.	120	20	8
109A 11-80965	Zipvap 96, 96-position evaporator for 96 well plate, gas inlet heated, with flowmeter.	120	20	8
109A 11-80333	Zipvap 96, Triple position evaporator for (3) 96 deep well plates, gas heater and flow meters with on/off switches.	120	50	12

Sample Preparation



Barvap

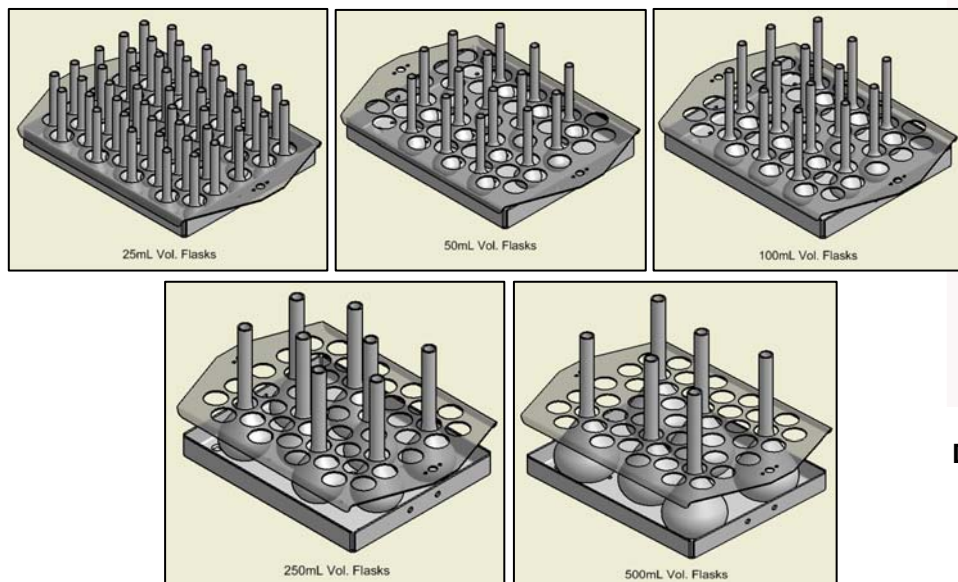


Catalog Number	Description	Max PSI	Product Weight (lbs)
109A 11-06000	Barvap 6, 6 position unheated bar evaporator, with six 4" bent needles, needle valve and 3' of 1/4" tubing	40	2
109A 11-06001	4" needles with plated metal hub, bent. Set of 6		0.2
109A 11-06005	1/4" OD x 1/8" ID silicone tubing - 3' piece		0.2
109A 11-12000	Barvap 12, 12 position unheated bar evaporator, with 12 - 4" bent needles, 2 needle valves and 2 - 3' pieces of tubing	40	5
109A 11-13001	Aluminum Barvap holder for six 13mm diameter vials (nickel plated)		2
109A 11-16001	Aluminum Barvap holder for six 16mm diameter vials (nickel plated)		2
109A 11-20001	Aluminum Barvap holder for six 20mm diameter vials (nickel plated)		2

Accessory Blocks

Catalog Number	Description	Product Weight (lbs)
109A 12-70022	Aluminum block holder for two 61mm flasks	1
109A 12-70082	Aluminum block holder for 8 vials up to 28mm diameter	1
109A 12-70122	Aluminum block holder for 12 vials up to 22mm diameter	1
109A 12-70202	Aluminum block holder for 20 vials up to 15mm diameter	1
109A 12-70242	Aluminum block holder for 24 vials up to 12mm diameter	1
109A 12-70243	Aluminum block holder for 24 vials up to 15mm diameter	1
109A 12-70248SP	Aluminum block for 24 vials, 8mm diameter, auto sampler vials	1
109A 12-70482	Aluminum block for 48 vials, 12mm diameter, auto sampler vials	1
109A 12-70483	Aluminum block for 48 vials, 8mm diameter, auto sampler vials	1
109A 12-70484	Aluminum block for 48 vials, 6mm diameter, auto sampler vials	1

Sample Preparation



Digital Pulse Mixer Shown with 100ml Volumetric Flasks & Hold Down Top

Our Digital Pulse Mixers are ideal for preparation work in Volumetric flasks. Simply changing the chemical resistant bottom foam pad allows you to quickly switch flask sizes while using one standard hold down top.

Catalog Number	Description	Input Voltage	RPM
099A DPM12	Mixer base Digital	120	150-1500
099A DPM24	Mixer base Digital	240	150-1500
R80 1027	Hold down top with holes	N/A	N/A
R66 501	½" pad for 25ml vol. flask, 49 Position	N/A	N/A
R66 502	½" pad for 50ml vol. flask, 14 Position	N/A	N/A
R66 503	½" pad for 100ml vol. flask, 14 Position	N/A	N/A
R66 504	½" pad for 250ml vol. flask, 8 Position	N/A	N/A
R66 500	½" pad for 500ml vol. flask, 6 Position	N/A	N/A

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