



Questron Technologies Corp.

Chemistry – With Precision...

World class solutions for Automated Sample Prep,
Microwave Digestion/ Ashing, Liquid Handling,
Lab Scrubbers, Accessories & Consumables.



Automated Sample Prep Workstations & Microwave Digestion Solutions

Mining Industry | Soil Testing |
Agriculture, Tobacco, Cannabis Industry | Food Industry
Stack Pollution Testing | Water Pollution Testing
Cosmetics | Pharmaceuticals & Nutraceuticals | Environmental



A first step for accurate metals analysis is bringing diverse samples into a mineralized state by applying heat & adding precise levels of heat and reagents.

Questron Technologies has dedicated twenty years in finding solutions to this complex process.

Our products digest, prepare and automate - with minimal contamination, highest accuracy and has long instrument life in a hostile environment of acids and heat.

We are proud to present our sample preparation products.

Should you need customised solutions, just give us a call!

Vulcan Series

Automated Digestion and Work-Up System

Ultra-Pure, Consistent,
Automated Sample Preparation

Enhancing Safety & Efficiency
in Laboratories



All-Plastic, Adaptable
Workstation

Increasing High-Throughput
in Corrosive Environments



Glass & PTFE Syringes

Peristaltic Pumps

- Option of Syringe or Peristaltic pump based reagent delivery system
- Syringes and Pumps available for all liquids including HF, HClO₄, H₂O₂, KMNO₄ and H₂SO₄
- Automated Reagent Management
- Flow rate up to 1.5 ml/sec

Independent reagent lines reduce priming operations, increase dispensing speed and minimize contamination



Option of PTFE syringes for ultra-pure dispensing

PTFE Coated Graphite Digestion Blocks



Pneumatically driven tray lift moves samples in and out of the digestion block. This provides precise, automated heating and cooling of the samples.



- Choice of digestion block, standard size (50 ml, 42 samples) and large size (50 ml, 72 samples)
- Digest samples up to 230 °C
- Temperature homogeneity of ±1%
- Anodised Aluminum blocks available for higher temperatures
- Easy to add alternate blocks for other sample volumes

Digestion blocks accommodate 15, 25, 50 and 100 ml vials





Dilute Up To Mark

Ultrasonic, non-contact sensor reads the initial sample volume and dilutes the sample to the users specified volume.



Stirring Samples

Samples are homogenized by a stream of bubbles which force the sample to mix with the lighter diluent. The probe also moves laterally to help speed up this process.



Transfer

After the digestion is complete, the system can transfer an aliquot of the digestate to an autosampler rack.



Cleaning

The sample probes are washed in a dual chamber wash station to eliminate sample-to-sample cross contamination. The diluent flows within the well to clean the sample from the sample loop.



User Interface

The Vulcan software provides complete control and flexibility over the automation. The ease of method development allows users with unique samples and processes to customize the system for their applications.

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ULPA Filter Arrangement

- Built-in fume hood saves valuable space in the laboratory
- ULPA/HEPA filter options maintain a clean work area
- Compatible for use with Perchloric acid
- Excellent fume extraction arrangement
- Option of built-in industrial computer
- Accessories include: acid resistant exhaust blower, fume scrubber and reagent storage cabinet
- Customization for unique vials and reagent dispensing is available

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	QBlock Capacit	Syringe Pump	Peristaltic Pump
V84S	2	6	1
V84P	2	-	8
V42S	1	6	1
V42P	1	-	8

Sample Transfer & Dilution feature is not available with large size QBlock



V42S



V42P

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Computer : Windows® 10 to XP™ operating system
with USB3 port & 4 GB RAM

Utilities : 208 VAC, 60 Hz, 15 Amps or
220 VAC, 50 Hz, 15 Amps

Exhaust Flow : 150 —200 CFM

Operating ambient temperature : 5 °C - 40 °C

Dispensing Accuracy : Syringe : ±0.05 ml

Peristaltic pump : ±0.1 - 0.15 ml

Dispensing Flow : Syringe : ±0.5 ml/sec

Peristaltic pump : ±0.5 - 1.0 ml/sec

Make Up Volume Accuracy : ±0.15 ml in 50 ml vial

Temperature Accuracy : ±1 %

	Vulcan 84	Vulcan 42
Dimensions (W x D x H)	117 X 64 X 77 cm (46 X 25 X 30 in.)	89 X 64 X 77 cm (35 X 25 X 30 in.)
Weight	80 kg (178 lb)	60 kg (133 lb)
Shipping Dimensions	130 X 87X 102 cm (51 X 34 X 40 in.)	97 X 87X 102 cm (38 X 34 X 40 in.)
Shipping Weight	138 kg (305 lb)	104 kg (230 lb)

Accessory Products

Laboratory Grade, Compact and Efficient Acid fumes Scrubber

Even if you have a roof-top scrubber, the acid fumes are better handled at the point of source, before they corrode and otherwise damage the conduits and other hardware to the roof-top. Questron's uniquely designed fume Scrubber was developed with our Vulcan product in mind, but it would find application at any place where concentrated and hot fumes are generated, such as in fume hoods. More than 90% efficiency is achieved for most exhaust constituents, such as HNO₃ and HF acids. The unit requires a source of clean water at 1 liter per minute. Package includes an acid resistant exhaust blower that provides exhaust flow through the scrubber at 1000 to 1400 ft per minute.



Laboratory Grade Scrubber
(18.5 " diameter X 34 " high)

Questron Portable Fume Enclosure

Questron Portable Fume Hood is an ideal choice in a laboratory application where a portable, table top, acid resistant enclosed space with a fume exhaust blower is required. It presents a viable alternative where permanently fixed fume hoods are too big and too expensive.

Two sizes are available. The 84-100-325A was ideally sized to accommodate one large size or standard size Questron digestion block. It has provision to continuously remove fumes from its inner space with a rugged acid resistant exhaust. The larger, 84-100-325B model can accommodate two large size Questron digestion blocks



Accessory Products

Reagent Bottle Storage Container

Designed with the Vulcan in mind, Questron Reagent Bottle Storage Container is ideal for safely storing glass or plastic bottles. The Container can sit beside or underneath the Workstation. The unit can accommodate six of 2.5 liter bottles of standard reagent or concentrated acid bottles. Separate compartments ensure that liquids posing danger or fuming or mixing can be separated. The unit is acid resistant and designed to catch accidental acid spillage. Gas tight entry ports and active removal of in-box fumes is possible via an exhaust line connected to lab exhaust system.

As additional feature enables use of commercial racks for installation in modular furniture.



Storage & Digestion Sample tubes

Questron makes a wide variety of tubes of various constructions. Primarily, they are used in our Vulcan and QBlock instruments, but they can also find home in any application that requires sample storage, sample analysis, etc. Below is a small sampling of our standard products in this category.

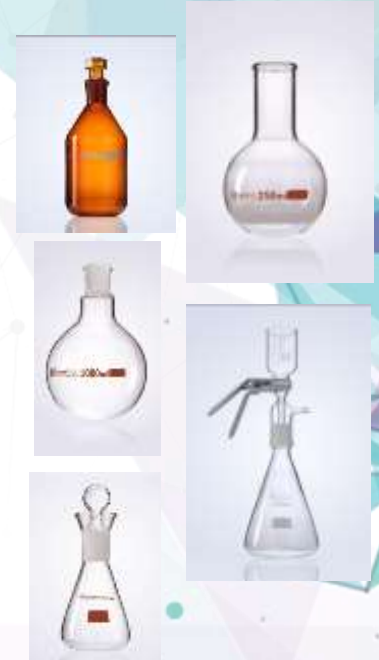


	Polypropylene	Glass	Teflon
50 ml	Yes	Yes	Yes
100 ml	Yes	Yes	Yes
Temp.	120 °C	650 °C	230 °C
Usage	Single	Multiple	Multiple
Cap	Yes	No	Yes

Laboratory Glassware

Our Raw Material :

- We use low expansion Borosilicate 3.3 as per ASTM E-438 Type –I.
- Borosilicate 3.3 is highly resistant to almost all Chemicals, salt solutions and other organic solvents .
- The labware are highly heat resistant, high resistance to thermal shock & high mechanical strength.
- Thermal expansion between 0-300/°C is $33 \times 10^{-7}/^{\circ}\text{C}$ and thermal conductivity 0.0027 cal/cm³/°C/Sec.
- Borosilicate 3.3 can handle temperature up to 240 degree Celsius for continuous usage under general laboratory conditions , whereas it can withstanding temperature around 400-450 degree Celsius for short-term usage .



Questron Promise

At Questron Technologies Corp, we strive to be a world class developer, manufacturer, and marketer of scientific products and services. Using all our resources and knowledge base in mechatronics, material science, and chemistry, our primary goal is to present our clients worldwide with the very best sample prep products and tools modern technology can provide. The need to measure is a necessary part for any scientific enquiry. It is our passion to be a player in this enquiry - to provide top notch products and services to the scientific community.

From conception to manufacture to final delivery, Questron provides time saving, safe, reliable products, that are easy to learn and operate.

We are scientists serving scientists – you talk, we listen.

We take pride in our promise to work in accordance with our core values.

- ◆ Innovation: We challenge the status quo to continuously improve.
- ◆ Teamwork: We work together to achieve our goals.
- ◆ Accountability: We hold each other to a standard of excellence.
- ◆ Dedication: We are committed to giving our very best every day.
- ◆ Integrity: We promise to do the right thing even when it is difficult.
- ◆ Respect: We treat others the way we expect to be treated.
- ◆ Safety: We care for the safety of our community, and environment.



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