

UNDERtheCAP

A Newsletter on issues and products for environmental analysis professionals, courtesy of



Quality Environmental Containers

Volume 10, No. 1

Beaver, West Virginia

Spring 2011

PITTCON CONFERENCE & EXPO 2011

At the 2011 Pittcon Conference & Expo, QEC's exhibit featured our **customized bar codes for Custom-Preserved** products, our improved and expanded line of sterile coliform sampling bottles, and our introduction of **ALTEF** as a desirable alternative to Tedlar gas sampling bags. See pages 2 and 3 for more information on these products.

In addition, and as always, the full line of QEC products was on display, including all of our **Custom-Preserved** products and our **Quality Assured Chromatography** autosampler products.

QEC has exhibited at world-famous Pittcon each of the past 15 years. It is an integral part of our marketing program, and an enjoyable opportunity to meet old friends, develop new prospects, and tell QEC's inspiring success story.

Hospitality and professionalism are essential to our Pittcon presence. From our Jelly Belly® Vials to our product displays to our cordial booth staff, QEC always makes an impression at this most important event for the analytical industry.



Left to Right: Mike McCune, VP sales & marketing; Barry Barajas, Exec VP & general manager; Darrell Fuller, western regional manager.



Above & above page right: QEC executive & senior staff greet and converse with a steady stream of visitors. Our Pittcon booth always has experienced, knowledgeable staff on hand, ready to answer questions and able to close the deal.

Texas Commission on Environmental Quality

QEC's western regional manager, Darrell Fuller, invites you to visit our exhibit at the TCEQ Environmental Trade Fair & Conference in Austin, Texas, May 3-4. We'll have the full display of QEC products, and maybe a surprise or two.

Visit us in Booth 1621



Call toll free **1-800-255-3950** or visit **www.qecusa.com**

Simple Bar Code

**Lot Number:**

Available on all products at all levels.
Incorporates date of production

Container Number:

Unique to the individual container.
Correlates to the Lot Number

Complex Bar Code

**QEC Container ID Number:**

Expresses cleaning level, material, clear/amber,
type & volume of container

Lot Number:

Available on all products at all levels.
Incorporates date of production

Preserving Code:

Expresses chemical concentration and amount

Date:

Of preservation or chemical lot number

Date: As a redundant check or open field

Container Number:

Unique to the individual container.
Correlates to the Lot Number

QEC's Custom-Preserved production staff has the ability to create made-to-order bar codes for any customer, on any QEC Custom-Preserved container.

Our bar code system allows up to six fields of information that can be filled and coded specifically for your particular use.

In the sample at left, the code fields identify the item by the container ID number, the lot number (which also includes the date of production), as well as an individual container number.

Also shown is the preserving code, giving critical information about the concentration and amount, and a "date" field that can contain the date of preservation or chemical lot number.

An additional date field can be used as a redundant check, or as an open field for whatever other identifier the customer might designate.

Customers can use some or all of the six available fields, and can specify any identifier they need, printed in the order they want.

QEC believes "custom" means made to order, not just a list of options that's the same for everybody.

This is just one more way that

QEC puts the "custom" in

QEC custom
PRESERVED™

A word from the president...

Weathering the storm; stronger than ever



James L. Hern, PhD.

There's an age-old saying: storms weathered ultimately make us stronger. Certainly we have all faced the gales of a turbulent and difficult economy during recent years. Unfortunately, some have fallen while others have had the strength and ability to turn into the wind, make adjustments and control their destiny to safety. I'm happy to say that QEC is counted among the latter.

As we counter with new strategies to combat rising oil, energy, and commodity costs, QEC is positioned to make some major advances in the coming months and years. For one thing, we are poised to significantly expand our plant to more than triple our production and warehouse capacity. We're also taking steps to upgrade our marketing activities and expand our web presence; thus, informing our clients of ongoing programs, products and technical advances.

There are several other exciting developments in the works, but the point is that despite all the current challenges and difficulties-- or maybe because of them-- QEC is a stronger company today, leaning forward into a confident future.

QEC survives and thrives in part because of our philosophy of not losing sight of our core principles: Listen, listen, listen and respond with the products that our clients need and with the service they have grown to expect, all at a price that makes sense. From the viewpoint of our entire QEC structure every struggle, challenge, and success is a stepping stone, not a place to rest or time to become complacent.

Call toll free 1-800-255-3950 or visit www.qecusa.com



Expanded & Improved Line of Sterile Coliform Sampling Bottles



Large 250mL screw cap bottle with fill lines at 100mL, 150mL, and 200mL. The 120mL screw cap is available with or without 100mg sodium thiosulfate tablet. Both bottles meet EPA requirements for Bact-T sampling.



120mL flip-top container with 100mg sodium thiosulfate tablet

Quality Environmental Containers has improved its line of coliform sampling bottles by obtaining containers of superior construction and design, and adding two sizes of screw cap bottles.

120mL Flip-Top

QEC offers a presterilized disposable polypropylene 120ml flip-top bottle with a 100ml fill line ($\pm 2.5\%$) that meets EPA requirements. The airtight lid and locking arrow assure sterility prior to opening.

The 120mL flip-top is available with or without the 100mg sodium thiosulfate tablet.

The latch closure prevents accidental opening, and a custody tie assures sample integrity.

120mL Screw Cap

QEC's new 120mL screw cap bottle is made of optically clear non-fluorescent polystyrene. The 38mm cap is leakproof, and the container is sterile until opened for use. This product meets EPA requirements for Bact-T sampling and is available with or without the 100mg sodium thiosulfate tablet. It comes ready for use with a paper tamper-evident seal.

250mL Screw Cap

Our new 250mL screw cap bottle features easily visible fill lines at 100mL, 150mL, and 200mL. This container is constructed of tough lab grade HDPE plastic. The 38mm cap is leakproof and the container is sterile until opened for use. Like the 120mL, it meets EPA requirements for Bact-T sampling. The bottle has two 100mg sodium thiosulfate tablets inside. This item comes ready for use with a paper tamper-evident seal.

ALTEF provides a practical, efficient alternative to Tedlar

In recent years Tedlar gas sampling bags have increased in price and decreased in availability, mainly due to the strong and growing demand for Tedlar film by the burgeoning photo voltaic industry. QEC has been watching this trend and has been investigating viable alternatives to Tedlar.

ALTEF is a proprietary fluoropolymer film developed specifically for air/gas sampling uses. ALTEF meets or exceeds many of the desired characteristics of Tedlar and has similar stability properties for a wide variety of compounds.

It should be noted that ALTEF is not recommended for ketones or esters in high concentrations ($>30\%$). ALTEF is also not suitable for storing H_2S .

Compared to Tedlar, ALTEF presents lower VOC background and provides longer storage for many compounds. Also, ALTEF does not exhibit background levels of DMAC as Tedlar does.

QEC also stocks multi-layer foil gas sampling bags. A comparison chart of ALTEF vs. multi-layer foil bags is posted on the following page:

Film	Thickness	Tensile Strength	Max. Operating Temperature	Specific Gravity	Oxygen Permeability	Water Vapor Permeability	Carbon Dioxide Permeability
ALTEF	0.003"	6100 psi	150° C (302° F)	1.78	58 cc/m ² x d	12-15 g/m ² x d	172 cc/m ² x d
Tedlar	0.002"	8000 psi	204° C (400° F)	1.70	50 cc/m ² x d	9-57 g/m ² x d	172 cc/m ² x d



Capabilities comparison of ALTEF and Multi-Layer Foil gas sampling bags, based on commonly-sampled chemical compounds

VOCs

Compound	Recommended sampling bag material	
	ALTEF	Multi-Layer Foil
Acetone		
Acetonitrile		
Acrylonitrile		
Allyl chloride		
Benzene		
Bromoethane		
Butyl acetate		
Carbon tetrachloride		
Chloroform		
Carbon dioxide		
Carbon monoxide		
1,2-Dichloroethane		
Dichloropropane		
Ethyl acetate		
Ethylene		
Heptane		
Hexane		
Isooctane		
Isopropyl alcohol		
Methane		
Methyl ethyl ketone		
Methylene chloride		
Methyl tert-butyl ether		
Octane		
Perchloroethylene		
Propylene		
Propylene oxide		
Tetrahydrofuran		
Toluene		
1,1,1-Trichloroethane		
Trichloroethylene		
Vinylidene chloride		
p-Xylene		

Sulfur Compounds

Compound	Recommended sampling bag material	
	ALTEF	Multi-Layer Foil
n-Butyl mercaptan		
tert-Butyl mercaptan		
Carbon disulfide†		
Carbonyl sulfide		
Diethyl disulfide		
Diethyl sulfide†		
Dimethyl disulfide		
Dimethyl sulfide†		
2,5-Dimethylthiophene		
Ethyl mercaptan†		
Ethyl methyl sulfide†		
2-Ethylthiophene		
Hydrogen sulfide		
Isobutyl mercaptan†		
Isopropyl mercaptan†		
3-Methylthiophene		
Methyl mercaptan†		
n-Propyl mercaptan†		
Tetrahydrothiophene		
Thiophene†		

Color Code:

Dark Green = Recommended

Light Green = Suitable when used as recommended

Red = Not Suitable

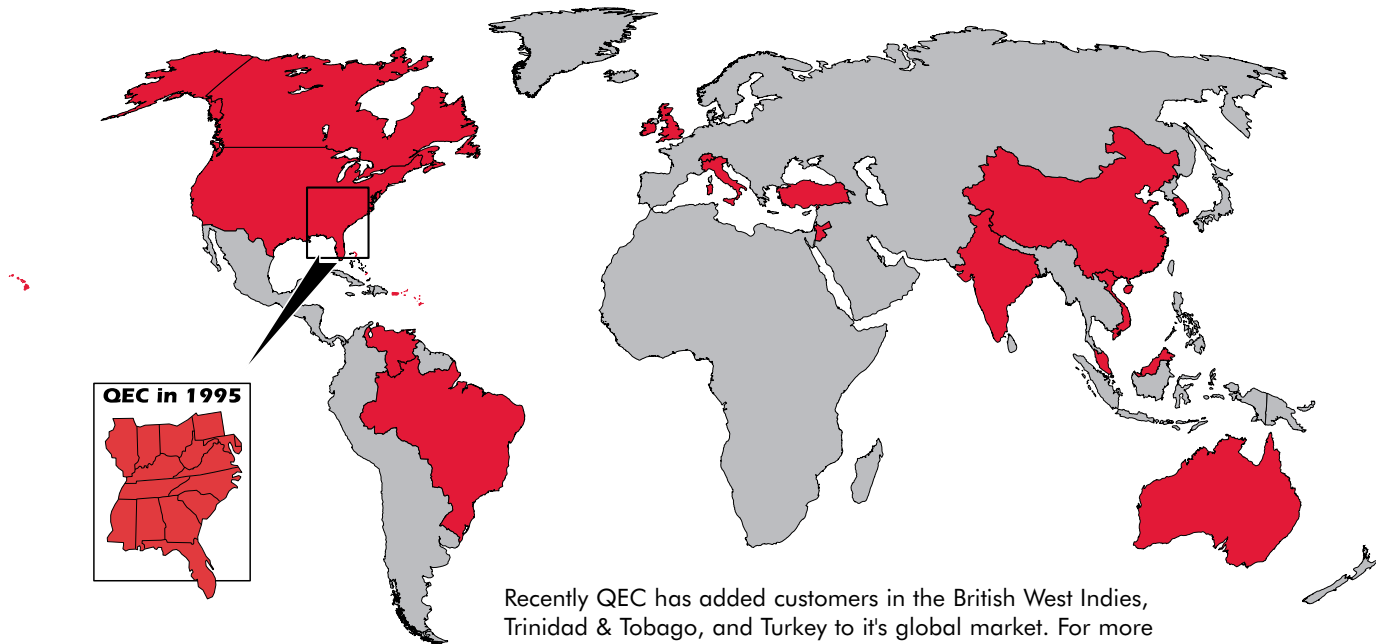
† - ALTEF bags can be used to sample these compounds if sample is analyzed with 24 hours.

ALTEF bags are recommended for most VOCs, if analyzed within 48 hours; and for many sulfur compounds, if analyzed within 24 hours.

Multi-Layer Foil bags are recommended for Methane (CH₄), Hydrogen Sulfide (H₂S), Carbon Monoxide (CO), and Carbon Dioxide (CO₂), if analyzed within 48 hours.

Multi-Layer Foil bags are not recommended for collecting low ppm VOCs due to background levels from bag materials.

QEC adds international customers...



Recently QEC has added customers in the British West Indies, Trinidad & Tobago, and Turkey to its global market. For more information about world-wide availability of QEC products, please contact our International Desk:

MIKE McCUNE 800-255-3950

Call toll free **1-800-255-3950** or visit **www.qecusa.com**

QEC

Quality Environmental Containers

P.O. Box 1160, Beaver, WV 25813

QEC EXPRESS

Next Day Service
No Expedite Charges*

Orders for in-stock QEC products received by 3:00pm ET can be at your lab or job site in the continental United States the next day. Tell your customer service rep you need **QEC Express™** service and your order will be processed and shipped that day.

**Freight company charges will apply.*