

TREK DIAGNOSTIC SYSTEMS

TREK

Times

INSIDE THIS ISSUE:

The Xtra Results You Have Been Waiting For on Gram Negative Organisms	2
VersaTREK Recovers Yet Another Interesting Organism: <i>Brevundimonas vesicularis!</i>	3
Responding to Your <i>Streptococcus</i> spp. Testing Needs	4
VersaTREK's Comprehensive Detection Technology Delivers-Why Settle for Anything Less?	5
TREK's Lab Service Department	7
Field Service and Equipment Support-Just Like Part of the Family	8
TREK Features FDA-Cleared Vizion System at ASM 2009	8
Discover the Latest TREK Products at Discovery Workshops	9
TREK 2009 Trade Show Schedule	9

NEWS AND INSIGHT FOR THE CLINICAL MICROBIOLOGY LABORATORY

Customer Profile

Welcome Back, ARIS® 2X!

By Carla Williams, MT (ASCP), Microbiology Lead Tech, Memorial Lufkin Health Center

Memorial Lufkin Health Center is an acute care facility. The lab serves a three-hospital system, as well as a dialysis center, cancer center and a large outpatient base. It is located in Lufkin, Texas.

Memorial Lufkin was one of the very first customers to have a Sensititre® ARIS AST/ID system installed. As a matter of fact, an ARIS unit with the serial number 10 was placed here in the 1980's, even before I was a Med Tech student. Memorial loved the ARIS, as it never gave us a bit of trouble. However, a few years ago, a rapid system was brought into our laboratory to replace it as our AST/ID primary automated system.

We had continued to use Sensititre plates for testing non fermenting Gram negative and Streptococcal isolates, that our rapid system would not accurately test. And finally, after several years of really missing our ARIS, I was able

to reinstitute its use in the Fall of 2008.

So why did we come back? As microbiologists, we just love the fact that with the ARIS 2X, you can read the

olate an MIC value by matching a growth curve; it is a true endpoint determination.

As part of the ARIS 2X System, we also received the new Vizion digital imaging system (Part No. V-2020). The Vizion System gives us the ability to review off-shift manual isolate results. We did not have that option on our previous system, so this gives our laboratory the flexibility to turn out results in a timely fashion.



Memorial Lufkin Health Center welcomed the Sensititre ARIS 2X System into their laboratory because of the security they feel with their MIC results

“There is just no comparison for a truly mess-free, closed system which requires no maintenance or reagents.”

Sensititre plates visually, and see where the MIC is! With our previous rapid system, we never felt truly comfortable with the fact that changing the organism ID would change the MIC result. But the ARIS 2X does not extrap-

We are very excited about using the new Gram positive All-in-One (Part No. GPALL1F) MIC plate, which we can read manually on the Vizion System, or with the automated ARIS 2X. *(continued on p. 2)*

Customer•Profile

Welcome Back, ARIS 2X! (continued from p. 1)

It is going to be the most marvelous format for us! Dtest is right on the plate, and our Sensititre SWIN software automatically applies changes to the clindamycin result for us. Even the rapid systems require 18 hours for Dtest results! We are thrilled that we can eliminate *all* the extra testing (Dtest, Cefoxitin screen, Vancomycin agar, Etest) we had been doing for Gram positive organisms.

The Sensititre identification products are great, as well. We don't have to add any reagents, and we don't get no-

ties that additional esoteric tests are required to differentiate a growing list of organisms. The Sensititre SWIN® software just alerts us to input simple growth characteristics or spot tests that we typically already have results for in our bench notes, and then recalculates the improved ID results.

Our technologists truly believe that the Sensititre ARIS 2X is the **ONLY** real choice. The security that we feel in our MIC results is the primary reason but there is just no comparison for a

truly mess free, closed system which requires no maintenance or reagents. Do we miss our rapid system? The answer from my technologists would be a resounding, "No!"

We have so much confidence in TREK that we have submitted a purchase order for a VersaTREK blood culture instrument, and look forward to its installation, as well as the cost savings that it will provide. We anticipate continuing to work with TREK for a very long time!

NewProduct•Announcement

The Xtra Results You Have Been Waiting For on Gram Negative Organisms

By Joan Lamprecht, Associate Product Manager, TREK Diagnostic Systems

Sensititre now has two solutions for MIC results on your resistant non-fastidious Gram negative organisms.

The non-fermenter plate (Part No. NF) has been a staple in laboratories for testing resistant Gram negative isolates, including cystic fibrosis isolates. Only Sensititre has given laboratories the ability to report full formulary, true MIC results for these organisms.

Now, Sensititre offers you the added ability to test colistin, polymixin B, doxycycline and minocycline, as well as doripenem, ertapenem, imipenem and tigecycline using the new Xtra, Research Use Only format (Part No. GNXF*). The new Xtra format is suitable for use manually, with the Vizion® instrument, or with the fully automated ARIS® 2X system.

TREK is offering this Research Use Only product in response to customer requests for testing of colistin and polymixin B. CLSI M100 does list interpretive MIC guidelines for *Pseudomonas aeruginosa*, *Acinetobacter*

spp. and non-Enterobacteriaceae for these lipopeptides. However, until the FDA approves breakpoints for these compounds, they must maintain a Research Use Only designation and not be used for clinical reporting or diagnostic procedures.

The GNXF* format has an eighteen month shelf life at room temperature storage. Contact your TREK Area Account Manager or TREK Customer Service Representative at 800-871-8909 in the U.S., or internationally at +44 1342 31877 to learn more about ordering this format for your laboratory.

Part No.:	NF	GNXF*
<u>Antimicrobial</u>	<u>µg/ml</u>	<u>µg/ml</u>
Amikacin	4-32	4-32
Amp/Sul	2/1-16/8	
Aztreonam	2-16	2-16
Carbencillin	32-256	
Cefepime	2-16	2-16
Cefoperazone	4-32	
Cefotaxime	4-32	1-32
Ceftazidime	1-16	1-16
Ceftriaxone	4-32	
Chloramphenicol	2-16	
Ciprofloxacin	0.25-2	0.25-2

<u>Antimicrobial</u>	<u>NF</u>	<u>GNXF*</u>
Colistin		0.25-4
Doripenem		0.12-2
Doxycycline		2-16
Ertapenem		1-16
Gentamicin	1-8	1-8
Imipenem	1-8	1-8
Levofloxacin	0.5-4	1-8
Meropenem		1-8
Minocycline		2-16
Piperacillin/Tazobactam	8/4-64/4	8/4-64/4
Piperacillin	8-64	
Polymixin B		0.25-4
Sulfsoxazole	256	
Tetracycline	1-8	
Ticarcillin/Clavulanic Acid	16/2-128/2	16/2-128/2
Ticarcillin	8-64	
Tigecycline		0.25-8
Tobramycin	1-8	1-8
Trimethoprim/Sulfamethoxazole	0.5/9.5-4/76	0.5/9.5-4/76

*For Research Use Only. Not for use in diagnostic procedures.

TREK•News

VersaTREK Recovers Yet Another Interesting Organism: *Brevundimonas vesicularis*!

By DeAna Paustian, Senior Marketing Specialist, TREK Diagnostic Systems

An 89-year-old male nursing home resident who had fallen was brought to the emergency room department. The admitting diagnosis was right parietal intracranial hemorrhage, with resultant paresis and aphasia and dysphasia. Other than the fall, the patient appeared to be in excellent physical condition and took medication for glaucoma only.

Admitting laboratory work was normal with the exception of slight anemia and elevated glucose. The patient was admitted to ICU for observation, and blood cultures were obtained. One of two blood cultures signaled positive at 57.4 hours on the VersaTREK Automated Microbial Detection System.

The positive aerobic bottle demonstrated a gram variable rod and was subcultured onto BAP, MAC, PEA and Brucella agar. No organisms grew after overnight incubation. On the second day, orange colonies appeared on the BAP only. Oxidase reaction was positive, and final identification was confirmed as 99% *Brevundimonas vesicularis*. The organism was susceptible to the following drugs: Amikacin, Cefepime, Cefotaxime, Ceftriaxone, Chloramphenicol, Gentamicin, Imipenem, Levofloxacin, Meropenem, Piperacillin/Tazobactam, Piperacillin, Tetracycline, Ticarcillin/Clavulanic Acid, Tobramycin and Trimethoprim/Sulfamethoxazole. The patient was treated for sepsis with Levaquin® and made a full recovery.

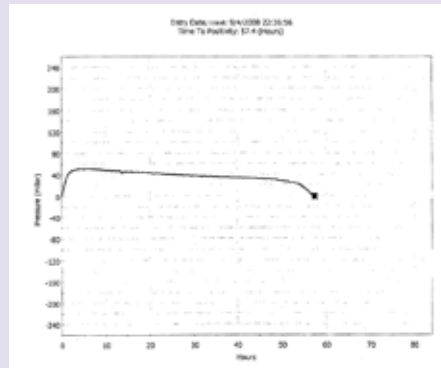
What Is *Brevundimonas vesicularis*?

Brevundimonas vesicularis was formerly known as *Pseudomonas vesicularis*. The organism is an infrequent cause of infection in humans, however, it has been reported in a hemodialysis patient, an open-heart surgery patient,

an individual with sickle cell anemia and an immunocompromised individual¹. In addition, documentation exists that demonstrates the organism caused infective endocarditis in a healthy male from an occult dental abscess².

The organism is an aerobic nonspore-forming Gram negative bacillus. It is motile and grows best at 26°C. A common characteristic of the organism is its ability to produce bright colored orange colonies.

VersaTREK's comprehensive detection technology is not limited to CO₂ production and, therefore, the system was able to quickly recover the organism in less than three days, as seen by the downward dip (gas consumption) in the patient graph.



The VersaTREK's comprehensive detection technology was able to recover *Brevundimonas vesicularis* in less than three days.

TREK would like to thank Daniel Cullison and his staff at The Medical Center in Columbus, GA for sharing this interesting organism with us. If you have an interesting sepsis case you would like to share with us, please contact DeAna Paustian at 800-871-8909, Ext. 104 or email at dpaustian@trekds.com.

¹ Manual of Clinical Microbiology. (8th ed.)

² Yang, M., Chen, H., Lin, W., Lin, C., Lu, P. (2006). Case Report: Infective Endocarditis caused by *Brevundimonas vesicularis*. BMC Infectious Diseases. Retrieved from <http://www.biomedcentral.com/1471-2334/6/179>

New Product • Announcement

Responding to Your *Streptococcus* spp. Testing Needs

By Joan Lamprecht, Associate Product Manager, TREK Diagnostic Systems

If you are one of the many customers who loved the Sensititre *Streptococcus* spp. MIC plate (Part No. STP5F), you will certainly appreciate our recent update (Part No. STP6F), which now includes **azithromycin** and **augmentin (amox/clav)**, in addition to daptomycin and tigecycline.

If you have not used our *Streptococcus* spp. plate, it may be time for you to take a closer look at Sensititre for testing *Streptococcus pneumoniae* as well as ALL *Streptococcus* spp. isolates.

Sensititre provides true MIC readings in accordance with FDA recommendations for better critical disease care. The *Streptococcus* spp. plate contains antimicrobial only- broth is added at time of test, ensuring accurate, easy to view test results.

Large or small test volumes are accommodated by room temperature storage and 18-month shelf life, along with the manual Vizion instrument and fully-automated ARIS 2X read options.

Contact your TREK Area Account Manager or TREK Customer Service Representative at 800-871-8909 in the U.S., or internationally at +44 1342 31877 to learn more about ordering this format for your laboratory.

Part No.:	STP5F	STP6F
Antimicrobial	<u>µg/ml</u>	<u>µg/ml</u>
Augmentin (Amox/Clav)	NA	2/1-16/8
Azithromycin	NA	0.25-2
Cefepime	0.5-8	0.5-8
Cefotaxime	0.12-4	0.12-4
Ceftriaxone	0.12-2	0.12-2
Cefuroxime	0.5-2	0.5-4
Chloramphenicol	1-32	1-32
Clindamycin	0.12-1	0.12-1
Daptomycin	0.06-2	0.06-2
Ertapenem	0.5-4	0.5-4
Erythromycin	0.25-2	0.25-2
Levofloxacin	0.5-16	0.5-4

Part No.:	STP5F	STP6F
Antimicrobial	<u>µg/ml</u>	<u>µg/ml</u>
Linezolid	0.25-4	0.25-4
Meropenem	0.25-2	0.25-2
Moxifloxacin	1-8	1-8
Penicillin	0.03-4	0.03-4
Telithromycin	0.5-4	NA
Tetracycline	1-8	1-8
Tigecycline	0.015-0.5	0.015-0.12
Trimethoprim/ Sulfamethoxazole	4/76	4/76
Vancomycin	0.5-4	0.5-4

Antimicrobial	STP6F	VITEK® 2 AST GP65*	MICroSTREP plus®
Ampicillin			✓
Augmentin (Amox/Clav)	✓		✓
Azithromycin	✓		✓
Cefaclor			✓
Cefepime	✓		✓
Cefotaxime	✓	✓	✓
Ceftriaxone	✓	✓	✓
Cefuroxime	✓		✓
Chloramphenicol	✓	✓	✓
Clindamycin	✓		✓
Daptomycin	✓		
Ertapenem	✓	✓	
Erythromycin	✓	✓	✓
Levofloxacin	✓	✓	✓
Meropenem	✓		✓
Linezolid	✓	✓	
Moxifloxacin	✓	✓	
Penicillin	✓	✓	✓
Ofoxacin		✓	
Telithromycin		✓	
Tigecycline	✓		
Tetracycline	✓	✓	✓
Trimethoprim/ Sulfamethoxazole	✓	✓	✓
Sulfamethoxazole	✓		
Vancomycin	✓	✓	✓

**Streptococcus pneumoniae* only

TREK•Profile

TREK's Lab Service Department: Frozen MIC Plates and Other Services Important to Clinical Diagnostic Laboratories

By Cindy Knapp, Director of Laboratory Services, TREK Diagnostic Systems

Many of you are aware that TREK produces custom MIC plates, but you may not realize that Lab Service custom MIC plates, offer laboratories more flexibility than any other diagnostic manufacturer.

For example, TREK can manufacture batch sizes as small as 100 plates. Small batch sizes are ideal for special studies that pharmaceutical companies implement for various reasons. Often, they begin to work with a new drug that has not been tested in vitro, or they may screen several similar drugs to determine which one to move forward into clinical trials. They may be looking for a new antimicrobial indication for use or want to combine their drug with another drug to determine synergistic effects. TREK custom frozen plates are ideal for these types of studies.

The frozen MIC plate process begins when new compounds, or new applications for existing antimicrobials, are developed on frozen CLSI reference plates.

Once an antimicrobial has been tested on frozen MIC plates, drug development is transferred to TREK's UK R&D team for Sensititre dried MIC plate development. In many instances the Lab Service department is involved in validation studies to compare dry and frozen MIC plate performance. The development of an antimicrobial in a dry plate is important because it expedites our processes to gather data for FDA 510(k) clinical trials. This means that when a pharmaceutical company receives their FDA approval for a new drug, Sensititre MIC plates can be manufactured.

In certain circumstances, TREK is able to offer the new antimicrobial on a Sen-

sititre dry MIC plate with a research use only indication so clinical laboratories can begin testing organisms sooner.

Other products and services offered by the TREK Lab Service group include:

- When a drug is transferred to the UK for dried plate development, a validation study needs to be completed to ensure that the performance of the dried plate is equivalent to the frozen reference plate. These studies are performed by the Lab Service department.



TREK's Lab Service Department produces custom MIC plates for laboratories of all sizes, with the newest antimicrobials on the market.

- CLSI M23 studies are also performed on frozen plates. These CLSI M23 studies are performed in order to set the Quality Control standards for all new antimicrobials that are tested in clinical diagnostic labs.

- Lab Service works very closely with numerous investigators and clinical sites to help them write protocols for studies, design plates to suit study needs and determine additional supplies needed to complete projects.

- A number of specialty broths are

manufactured in Lab Services, including: 7H9 with OADC (Part No.s T8100, T8000-15*), Cation Adjusted Mueller Hinton Broth (CAMHB) with OADC for testing on our Slow-Growing Mycobacterium plates (Part No. T8005*), RPMI for CLSI Yeast reference plates (Part No. Y3450* and Y3460*) and CAMHB with Lysed Horse Blood and 0.001% pyridoxal hydrochloride (Part No. CP116-10*) for nutritionally variant Streptococci. All specialty broths are put through Quality Control in Lab Services to qualify their performance on Sensititre MIC plates.

If you have any questions, concerns, or special requests, don't hesitate to contact TREK's Lab Service department at 800-871-8909.

*For Research Use Only. Not for use in diagnostic procedures.

TREK•Feature

Field Service and Equipment Support- Just Like Part of the Family

By Steve Dreifuerst, National Service Manager, TREK Diagnostic Systems

Did you ever feel inclined to give your auto service representative a hug when you saw them outside of their work environment? Neither have I. But that is exactly what happened to John Lilly, Service Account Manager – Mid Atlantic, during the TREK Discovery Workshop in Philadelphia this February. Near the end of the workshop discussion, John arrived to prepare the equipment for removal and a few of his customers jumped out of their seats to greet John as if he was a family member.

There are many more examples like this that show the strong bond TREK customers have with their Field Engineers and Equipment Support. Through our focus on customer service, excellent personnel retention and strong technical abilities, we have built relationships that span many years and multiple products. Team members such as Larry Vaughn and Mike Jenkins have serviced TREK products for over 15 years, and others like John Lilly and Jim Stuckey have been in the laboratory equipment service field for over 25 years.

Over the past seven years, I have had

the privilege of seeing the Field Service group move from an ESP-based service organization to one that includes VersaTREK, Sensititre and now Dynex instruments. All of them are supported by the internal Equipment Support team in Sun Prairie, Wisconsin. The team routinely works together to solve unusual issues and creates an atmosphere of cooperation and support, which means the customer gets to experience an exceptional final product.

The Equipment Support Team includes Mike Horne, Equipment Support Supervisor, who runs the shop with Engineering Technicians Sean Smith and Gary Johnson. Together, they prepare the equipment prior to shipment and load PCs with the appropriate software, as well as depot repair of instruments.

Since the equipment that we service has increased its reliance on computers for data gathering, report generation and control, the skill sets of the team have also moved forward. Training sessions are held throughout the year for both internal and external customers. We have also spent a considerable amount of time learning the Dynex products to help that organization make improve-

ments in their instruments. It makes for many miles driven or flown to keep the customers' equipment running correctly and providing the best customer service in the industry.

In the end, we all love what we do and work hard to make each customer feel that they are the most important one. Like we always prefer to state, Sales sells the first instrument and Service sells the rest. So, give a hug to your TREK Service Team—after all, they're part of the family!

TREK Features FDA-Cleared Vizion System at ASM 2009!

TREK will be showcasing their wide range of innovative products for the clinical microbiology laboratory, including the FDA-cleared Vizion System, at this year's 109th American Society for Microbiology General Meeting in Philadelphia, PA May 18-20th.

Visit TREK at **Booth #1301** to learn more about the VersaTREK Automated Microbial Detection System and Sensititre® ARIS® 2X Automated AST/ID System, as well as demonstrations of



TREK will showcase the FDA-cleared Vizion System at ASM 2009, as well as the VersaTREK and Sensititre ARIS 2X System.

the Vizion System. The Vizion System, TREK's latest addition to the Sensititre product line, features cost-effective, true MICs with LIS connectivity, as well as the ability to consolidate all offline susceptibility testing on a single, user-friendly instrument.

For more information on all TREK products, stop by **Booth #1301**. See you in Philadelphia!

TREK•News

Discover the Latest TREK Products at Discovery Workshops

You're invited to *discover* what TREK products are all about at one of the upcoming Discovery Workshops! TREK Discovery Workshops give attendees the opportunity to learn the scientific principles behind the products straight from the experts, as well as hear testimonials and experiences from actual users. Hands-on product demonstrations of the VersaTREK Automated Microbial Detection System, Sensititre ARIS 2X Microbiology System and Vizion System are also included. Attendees even receive 4 P.A.C.E. credits for their participation!



Hands-on demonstrations of the VersaTREK, as well as the ARIS 2X and Vizion Systems, are offered at TREK Discovery Workshops.

Discovery Workshops are coming to a city near you! Upcoming workshops in 2009 include:

- **Anaheim, CA: August 2009**
- **Chicago, IL: September 29, 2009 at the Westin Chicago Northwest**
- **Cleveland, OH: November 11, 2009 at the Radisson Hotel Cleveland-Gateway**

To sign up for a workshop, contact Tracy Jarden at 800-871-8909 x205, or tjarden@trekds.com. For more information on Discovery Workshops, email info@trekds.com.

TREK 2009 Trade Show Schedule

ECCMID	5/16-5/19	Helsinki, Finland
ASM	5/17-5/21	Philadelphia, PA
NACMID	6/8-6/10	Portland, ME
AACC	7/21-7/23	Chicago, IL
SWACM	9/2-9/5	Fort Worth, TX
NWMLS	10/21-10/27	Seattle, WA
SEACM	11/4-11/6	Greenville, SC
SCASM	11/14-11/15	La Jolla, CA

Visit TREK at one of our 2009 Trade Shows!

