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microBYTES™

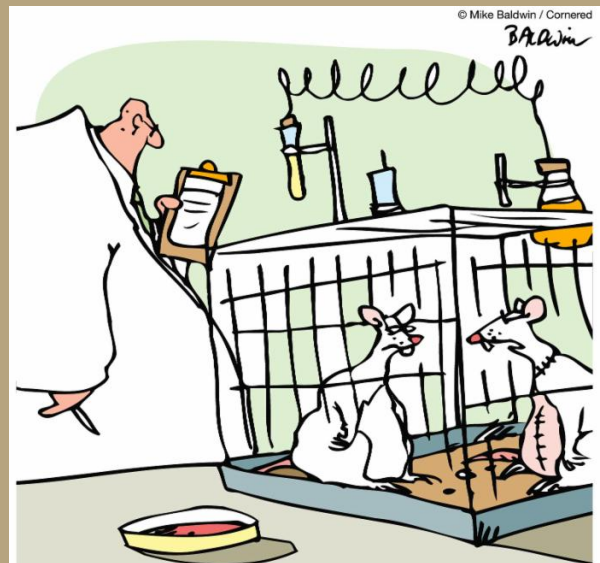
A Hardy Diagnostics eNewsletter

 **HARDY**
DIAGNOSTICS
a culture of service...

February, 2017

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Micro Musings...



"At first it's, we'll try this and we'll try that. But when there's a medical breakthrough, guess who takes all the credit."

H. Boyd Woodruff

1917 ~ 2017

Honoring one of the greatest antibiotic researchers.



Do you perform colony counts?...



Compact Dry

- Sample diffuses into the media, no need for a spreader!
- Room temp storage - long shelf life
- Small and space efficient
- Luxurious growth, large colonies, easy to count

- Color reactions distinct and specific

Watch a short video explaining the wonders of Compact Dry

Learn why Compact Dry is the best method for colony counts.

Try out some free samples in your lab!

* * *

Keep the stain where it belongs...



No Mess!
No Stress!



H. Boyd Woodruff seen here with his mentor Selman Waksman (left) at Rutgers University. Woodruff was instrumental in beginning the discovery of over 20 antibiotics derived from soil bacteria. Waksman was known to say:

***"Out of the earth
shall come
thy salvation!"***



Finding remedies in our own back yard

Learn more...



For environmental monitoring . . .

**C diff
Banana Broth**



Hardy's GramPRO 1 will rapidly stain your smears and get it right every time! Our patented technology judges the thickness of the smear and adjusts the decolorization step to perfection. Not only that, there are no messy clean-up or maintenance procedures. The GramPRO 1 will produce a perfect slide every time in about 4 minutes.

[Find out more about the GramPRO 1.](#)

[Watch a brief video on GramPRO 1.](#)

[View the brochure on all of Hardy's automated stainers.](#)

[Please contact me to discuss automated slide stainers.](#)

Phraseology...

"OVER A BARREL"



To be held "over a barrel" by someone would be a helpless predicament to be sure; but where did this phrase come from?

The first theory has to do with an old way of resuscitating a drown victim. The drowned person would be held over a barrel and rocked back and forth in order to expel the water from his lungs.

Don't like that theory? Another one has to do with college hazing. There are records of fraternity hazing that go back to the 1880's that entails binding the poor freshmen's hands and feet and rolling him over a barrel.

Either way...it's an uncomfortable position to be in to be sure!

* * *

Showing 2,700 products!



Hardy announces a new medium for the detection of *Clostridium difficile* bacteria and spores. This new medium is capable of saving hospitals many thousands of dollars. It is useful in monitoring the effectiveness of cleaning procedures used in patient rooms. This is the first and only culture medium that is designed for the detection of *C. difficile* and its spores on surfaces in a hospital setting. The specificity was found to be 100% in a recent study (see reference below). No special equipment or anaerobic supplies are needed! Obtain results in as little as 24 hours!



[View a short video](#) explaining how *C. diff* Banana Broth can increase the level of patient safety and save your hospital many thousands of dollars!

[See the catalog listing.](#)

[See the brochure.](#)

[Request a sample](#) for your evaluation.

* * * * *

New technology from UCLA . . .

Cell phones join
the global battle
against super-bugs

Hardy's Culture Media Catalog



Hardy is proud to announce its 2017 catalog of all culture media offerings.

This 85 page booklet contains descriptions of the 2,700 products that Hardy manufactures for the microbiologist.

[View](#) the digital version.

[Send me](#) the paper version.

[Please have](#) an account rep contact me about a price quote.

* * *

Hardy's dilution blanks...

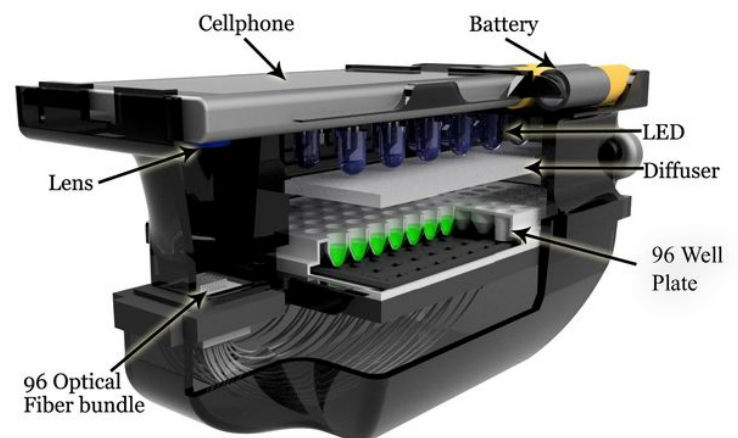
Dilu-loks



Hardy's Dilu-loks make diluting easy!

Antimicrobial susceptibility testing (AST) is a microbiological technique used to determine the specific antibiotics to which a particular pathogen will be sensitive or resistant. AST is routinely performed on patient samples to guide healthcare practitioners with the best possible course of antibiotic treatment. AST requires trained clinicians and access to laboratory resources in order to obtain accurate results.

In areas with fewer resources to perform this testing, unsuitable treatment may be given, which can be harmful to the individual patient and can further spread drug-resistant bacteria throughout a community.



A recent technological development from UCLA may help to provide quick and accurate routine AST results to more laboratories around the globe. This new technology combines the current gold standard AST technique, the broth microdilution method, with the interface of a digital cellphone. The current examination of the results of the broth microdilution requires a technician to interpret. With the portable system, broth turbidity in a 96-well plate can be assessed using a device that directly connects to a cellphone. The device uses an array of 96 LEDs, optical fiber sensors, and the cellphone camera to capture results

- Secure seal
- Many buffer formulas available
- Can open with one hand to make pipeting easy
- Wide mouth opening for bulky samples

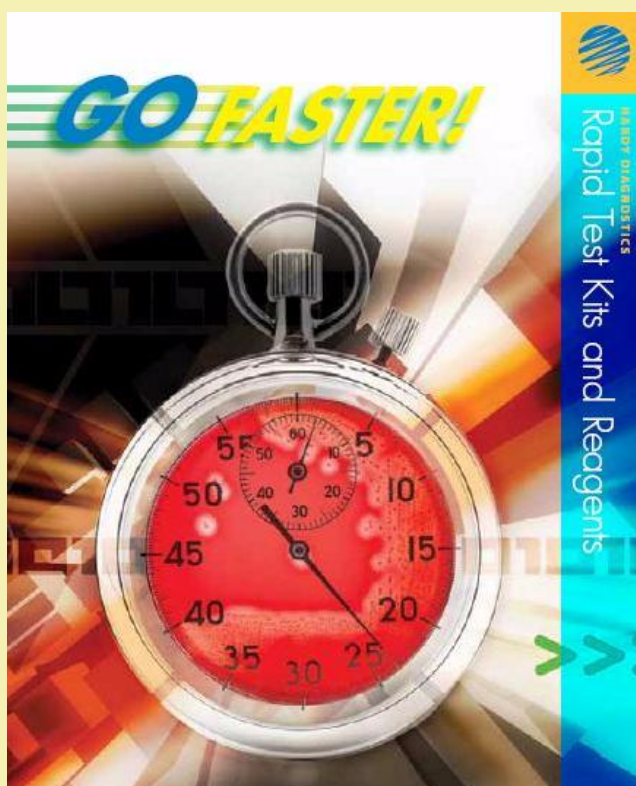
[See the brochure](#)

[Request samples](#) for evaluation in my lab.

[View](#) our entire catalog for food microbiology.

[Request a paper version](#) of our food micro catalog.

Let's get rapid...



[View](#) our online catalog detailing hundreds of rapid tests for microbial identification.

[Request](#) our paper version.

* * *

Brainteasers

from the transmitted light coming up through the micro wells.

The internal database software developed with the device processes these images and automatically generates MIC determination and susceptibility results by determining well-turbidity, effectively automating the process in less than one minute.

Results from the initial testing look promising. Researchers have validated the capability of this software and have determined it exceeds the current FDA criteria for susceptibility testing. Hopefully, this portable and cost-effective technology will be available soon for use in less developed clinical laboratories to help turnaround times and diagnose and prevent disease for a global impact against infectious disease.

Feng, S. et al. High-throughput and automated diagnosis of antimicrobial resistance using a cost-effective cellphone-based micro-plate reader Sci. Rep. 6, 39203; doi: 10.1038/srep39203 (2016).

L. Barth Reller, Melvin Weinstein, James H. Jorgensen, and Mary Jane Ferraro. Antimicrobial Susceptibility Testing: A Review of General Principles and Contemporary Practices Clin Infect Dis. (2009) 49 (11): 1749-1755 doi:10.1086/647952

* * * * *

*Hardy announces
a new chromogenic medium....*

HardyCHROM ESBL

Hardy Diagnostics is pleased to inform our customers that HardyCHROM ESBL (Cat No. G321) has recently received clearance from the FDA.

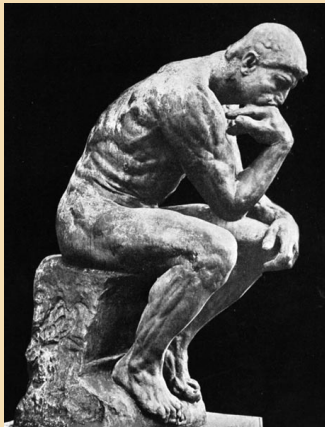


ESBL E. coli on the new HardyCHROM ESBL Agar



Scientists agree...
Brain power increases with use.
Use it here...
Enter

Think about it...



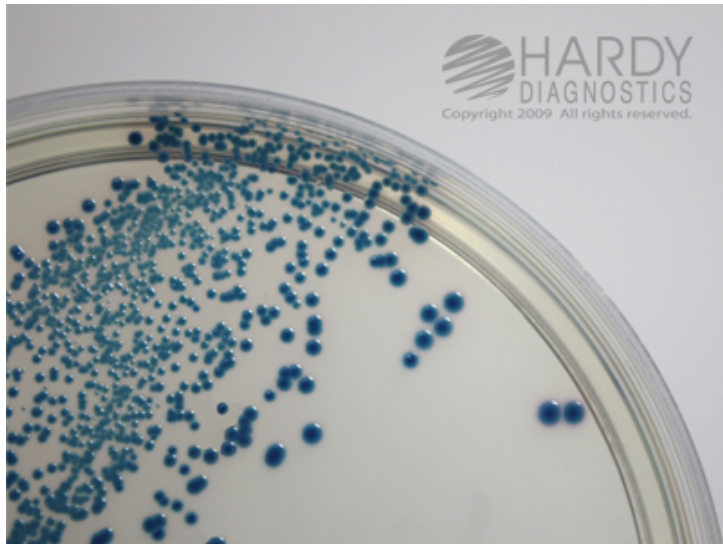
- * How come you never hear father-in-law jokes?
- * The statistics on sanity is that one out of every four persons are suffering from some sort of mental illness. Think of your three best friends -- if they're okay...then it's you.
- * Why does a round pizza come in a square box?
- * What disease did cured ham actually have?
- * How is it that we put man on the moon before we figured out it would be a good idea to put wheels on luggage?

* * *

Wisdom to Ponder...



ESBL E-test on the new Hardy CHROM ESBL Agar plate.



ESBL Klebsiella pneumoniae on HardyCHROM ESBL.

HardyCHROM ESBL serves as a selective and differential chromogenic medium containing a broad-spectrum beta-lactam intended for the qualitative and presumptive detection of *K. pneumoniae*, *K. oxytoca*, and *E. coli* that produce an extended-spectrum beta-lactamase (ESBL). In addition, it tests for Enterobacteriaceae that are potentially non-susceptible to broad-spectrum cephalosporins.

This chromogenic medium is to be used with fecal specimens and is intended as an aid in the detection, identification of colonization, and control of these bacteria in a healthcare setting.

Subculture to non-selective media is required for confirming identification, antimicrobial susceptibility testing, and epidemiological typing.

Hardy is the only media manufacturer to offer a selective medium to detect ESBLs. To try a sample of HardyCHROM ESBL in your lab, inquire about HardyCHROM ESBL with your Sales Rep today!

- [Find more information](#) on HardyCHROM ESBL.
- [See the Instructions for Use](#) (IFU).
- [Contact my sales rep.](#)



Julia Child - Part II

1912 ~ 2004

*Chef, author, and TV personality. With great joy and style she brought French cooking into American homes as the first modern day celebrity chef.
Shown above with husband, Paul.*

"How can a nation be called great if its bread tastes like Kleenex?"

"People who love to eat are always the best people."

"Find something you're passionate about and keep tremendously interested in it."

"It's so beautifully arranged on the plate - you know someone's fingers have been all over it. "

"In the 1960s, you could eat anything you wanted, and of course, people were smoking cigarettes and all kinds of things, and there was no talk about fat and anything like that, and butter and cream were rife. Those were lovely days for gastronomy, I must say."

"I think careful cooking is love, don't you? The loveliest thing you can cook for someone who's close to you is about as nice a valentine as you can give. "

"I was 32 when I started cooking; up until then, I just ate."

"This is my invariable advice to people: Learn how to cook- try new recipes, learn from your mistakes, be fearless, and above all have fun!"

"The sweetness and generosity and politeness and gentleness and humanity of the French had shown me how lovely life can be if one takes time to be friendly."

- [Request for samples](#) for evaluation.
- [See all](#) of Hardy's Chromogenic Media.

Trio Bas Air Samplers



Two heads are better than one!

Now with Bluetooth capability!

Trio Bas from Orum International has a robust impact air sampler for every type of use. Single, double, or triple heads are available from Hardy Diagnostics.

- [Watch a short video](#) that will explain why the Trio Bas is the best choice for your clean room.
- [See the complete Trio Bas catalog.](#)
- [Please have a sales rep contact me](#) about air samplers.

Optical oddities...



* * *

Online Ordering Made Easy!



Watch a short video
to learn how easy it is
to order from Hardy on-line!

Pick. Click. You're Done!

* * *



What instrument is being played here?
A guitar?
But wait...how about the saxophone player in the tree?

*"Believe half of what you see
and none of what you hear."
~ Benjamin Franklin ~*

Hardy's CRITERION



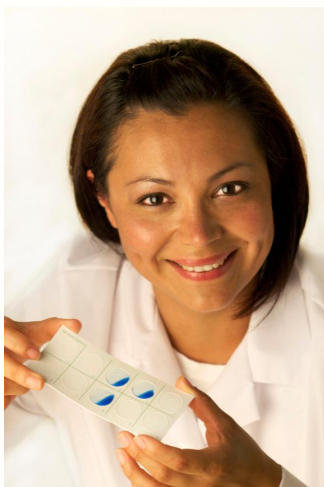
* Powdered media in four sizes: mylar envelope, 500gm, 2kg, 10kg.

* Extensive offering of formulas.

* Wide mouth opening allows use of scoop for reduced dust formation.

- View the brief video.
- See the digital catalog of CRITERION products.
- Request a paper catalog of all dehydrated culture

Did you know?



Hardy Diagnostics...

- Manufactures over 2,700 microbiology products for you to choose from.

Circle 10 on Reader Service Card for more information

- Stocks over 13,000 laboratory products for your "one stop shop" experience.
- Is celebrating its 36th year of serving microbiologists.
- Manufactures from three ISO certified factories; one in California, Ohio, and Texas.
- Maintains nine distribution centers in the U.S. for faster turn around time to your lab.
- Is ISO 13485 certified for the manufacture of medical devices to give you confidence in our products.
- Services over 10,000 labs and maintains a worldwide network of over 65 distributors.
- Is a 100% Employee-Owned company. *"If we act like we own the place...it's because we do!"*



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Want to view past issues
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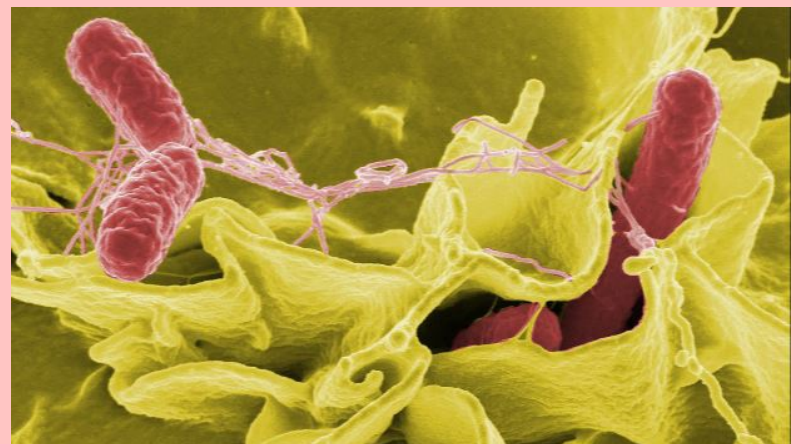
- [Get a price quote](#) for large orders.



Transitioning from the bad guy to the good guy...

Salmonella - The Game Changer

Salmonella, often associated with foodborne disease, may be a game-changer in the fight against prostate cancer.



Life is short...



Smile while you still have teeth!

"As Hardy Diagnostics enters its 37th year of serving microbiologists in the laboratory, I would like to thank each of our customers for their support and loyalty. It truly has been a pleasure to serve you!

If there is any way we can improve or expand upon our service, would you please let me know?"

Jay Hardy, CLS, SM(NRCM)
President
HARDY DIAGNOSTICS

[Send Jay a message...](#)



Money doesn't change men, it merely unmasks them. If a man is not really a fish, no amount of

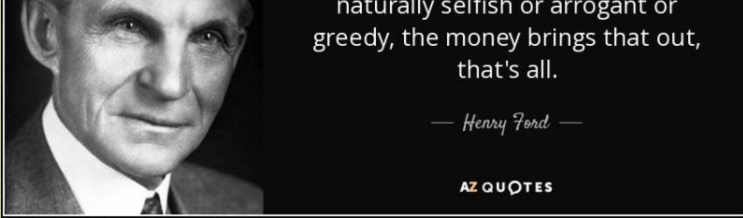
Researchers at Swansea University in Wales say they've made a breakthrough that may revolutionize the treatment of prostate cancer. Dr. Claire Morgan at the University's School of Medicine described the treatment as a "game-changer," stating scientists have discovered a way to shrink cancer cells using a harmless strain of the bacterium to target tumor cells, while leaving healthy cells unharmed.

This new method could mean patients receive only a single dose of treatment and the method may prove useful in fighting other forms of cancer as well.

The World Cancer Research Fund International states there were more than 1.1 million cases of prostate cancer worldwide in 2012. In addition, about 68% of these cases occurred in developed countries, with the highest rate of incidence occurring in Oceania and Northern America. Worldwide, prostate cancer is the fourth most common cancer of all cancers (occurring in both genders) and the second most common cancer in men; it is the fifth leading cause of cancer death in men worldwide. In the United States, the Centers for Disease Control and Prevention state prostate cancer is the single most common form of cancer among men and the leading cause of cancer death among men of all races. In the U.K., the disease claims the life of one man every hour.



Therefore, the team at Swansea University is hopeful their discovery will pave the way for better treatment outcomes. In their research, they modified the *Salmonella* bacterium to render it harmless and engineered cells so they could deliver a therapeutic molecule to target and reduce cancer cells. Professor Paul Dyson at Swansea University states, "we're exploiting a natural system within our cells that enables specific genes to be switched on or off."



Arrogance.



*A self-made man
who worships his creator.*

Warning:
**PUN ZONE
AHEAD**



When I first used an elevator it was really uplifting!
But then it let me down.

Q: Why do drama students do so poorly in school?
A: Understudy.

enables specific genes to be switched on or off. Consequently, the molecule coupled to the bacterium delivers the "switching off" mechanism to genes in cancerous cells that drive tumor growth. Once "switched off," tumor growth is disrupted. Cancerous cells have no natural defense against the modified bacterium and, once infected, cells become starved of nutrients and die.

Coupled to this natural gene mechanism is an anti-cancer drug which, unlike traditional chemotherapy and radiotherapy, is non-toxic and targets only tumor cells and not healthy tissue. Therefore, patients need only a single dose of treatment to achieve positive results.

Most traditional cancer therapies are very toxic and often cause additional illness or side effects; therefore, the fear associated with these therapies may cause patients to become resistant to treatment.

The new method discovered at Swansea University may not only change the way cancer therapy is delivered, but patient perception of treatment which may have even more positive effects.

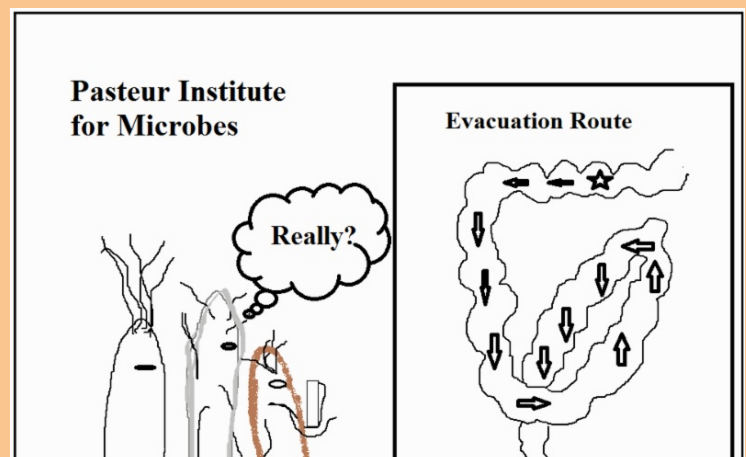
Presently, researchers have shown laboratory cultured prostate cancer cells shrink when exposed to the modified bacterium. Phase two will be to test the treatment in pre-clinical trials. In laboratory testing, the treatment has been

very successful, but the hope is pre-clinical testing will demonstrate its effectiveness with other types of cancers. If so, it could be a promising new treatment which may prove more cost effective and result in far fewer toxic side-effects than current therapies.

By Kerry Davies Pierce
Technical Support Manager - Hardy Diagnostics

References: [BBC](#), [WCRF](#), [Globocam](#), [CDC](#)

Safety Posters for Bacteria



Some people's noses and feet are built backwards:
Their feet smell, and their noses run.

I once knew a woman who owned a taser; man, was she
ever stunning!

When a clock is hungry, it goes back four seconds.

Q: What's the definition of a will?

A: It's a dead giveaway.

#

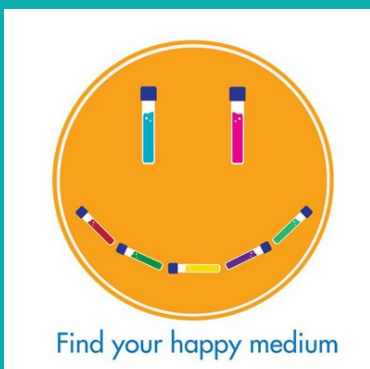


Jeff MacDonald

Submitted by Jeff MacDonald of Milwaukee, WI

RUBES

Hardy Diagnostics



[Find more](#)
of Leigh Rubin's cartoon humor.
Want to [book Leigh](#) as a speaker at your next event?





As a bagpiper, I play many gigs. Recently I was asked by a funeral director to play at a graveside service for a homeless man. He had no family or friends, so the service was to be at a pauper's cemetery in the Nova Scotia back country. As I was not familiar with the backwoods, I got lost and being a typical man, I didn't stop for directions.

I finally arrived an hour late and saw the funeral guy had evidently gone and the hearse was nowhere in sight. There were only the diggers and crew left and they were eating lunch. I felt badly and apologized to the men for being late.

I went to the side of the grave and looked down and the vault lid was already in place. I didn't know what else to do, so I started to play. The workers put down their lunches and began to gather around. I played out my heart and soul for this man with no family and friends. I played like I've never played before for this homeless man.

And as I played "Amazing Grace", the workers began to weep. They wept, I wept, we all wept together. When finished, I packed up my bagpipes and started for my car. Though my head was hung low, my heart was full.

As I opened the door to my car, I heard one of the workers say, "I never seen anything like that before, and I've been putting in septic tanks for twenty years."

