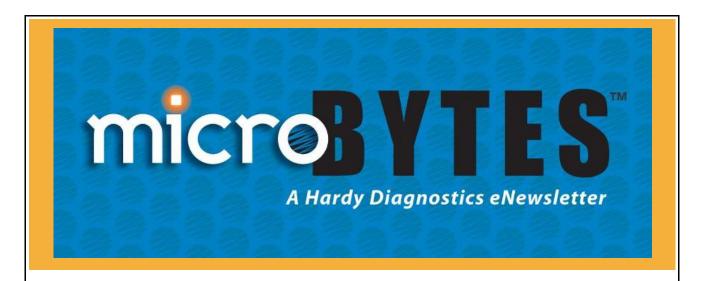
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September, 2013

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GOOD



<u>Petri-Seal</u> flexible tape can be stretched to seal the lid of your cultures in order to prevent dessication, and safely secure the lid.

BETTER

Micro Musings...



"Your computer was protected against viral but not bacterial infections."



Hardy's <u>MycoSeals</u> are flexible bands that are applied when wet to the Petri plate, then allowed to dry and shrink over time to create a tight seal; thus preventing the lid from being opened.

BEST



HardyFlasks are the best way, and the safest way, to culture TB and fungi. They provide a large surface area to work with and are made of clear plastic for undistorted viewing of the cultures. A loop can easily be inserted for picking colonies, with no seals to break. The screw cap can be slightly loosened for air exchange during incubation, which will produce better color development for fungal colonies. Flasks are stack-able and are packaged in boxes of 20 each.

Available HardyFlask formulas:

BHI Agar **BHI with Blood** BHI with C & C BHI with Blood and Gentamicin BHI with Blood, C & G Chocolate Agar DTM for Dermatophytes Inhibitory Mold Agar Lowenstein-Jensen LJ Gruft LJ with Pyruvate LJ with Ferric Amm. Citrate Middlebrook 7H10 Middlebrook 7H11 Middlebrook 7H11Selective Mycobiotic Agar Potato Flake Agar Potato Flake with Cipro & Vanco SabDex Agar SabDex, Emmons SabDex with Chloramphenicol SabHI Agar



This self replicating protein is responsible for a brain wasting disease that is untreatable and ultimately fatal.

You cannot kill it by autoclaving, or normal means of disinfection.

Read all about it!



SabHi with Blood, C & G Transgrow for GC

<u>Send me</u> a price quote or more information on HardyFlasks.

Brainteasers



Need some mental stimuli?

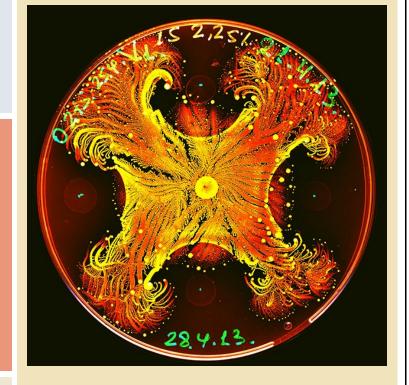
Enter here...

HardyCHROM Candida

Now you can order HardyCHROM Candida in the powder form as well as the prepared plates.



The dehydrated culture medium comes complete, so that no supplements need to be added. Just heat and pour into Petri plates. Available in a <u>2L mylar envelope</u>, <u>500gm jar</u>, <u>2K</u> and <u>10K</u> bucket.

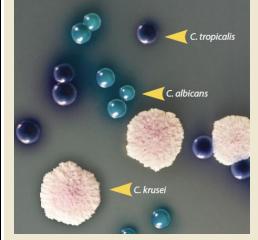


Ever seen a Petri plate with a colony like this?

Eshel Ben-Jacob has been growing some very interesting organisms with some amazing results in his lab in Israel.

By changing the temperature and other conditions during incubation, bacteria can produce some very bizarre growth patterns as they communicate with each other when they sense hostile conditions.

Ben-Jacob works with *Paenibacillus* dendritiformis and *Paenibacillus vortex*, two species of soil bacteria that he discovered over two decades ago.



<u>HardyCHROM Candida</u> makes yeast identification easy. Results in 48 hours or less.

View the Instructions for Use (IFU)

<u>Send me</u> a price quote or more information on HardyCHROM Candida.

<u>Send me</u> a catalog of all dehydrated culture media products.

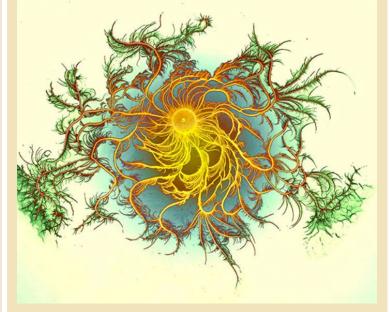
Strong Communities

At Hardy Diagnostics we believe in building strong communities. We are especially interested in providing opportunities for children that may not otherwise have a chance.

That's why we donate 1% of our profits to organizations dedicated to helping others. Among the non-profits that we regularly support are: The Boys and Girls Club, Special Olympics, YMCA, Good Samaritan Shelter, Salvation Army, Scholarship Fund, The Literacy Council, Haiti Medical Mission, and others.

Please join us in pledging to make a difference in this world!

"No one has ever become poor by giving."



To make the otherwise colorless bacteria stand out, he uses a Coomassie blue stain and some color manipulation in Photoshop to increase the visibility of the colonies.



Dr. Ben-Jacob is a professor of physics at the Tel Aviv University. You can <u>see more</u> of his fantastic, if not psychedelic, artwork on display at his website.

* * *

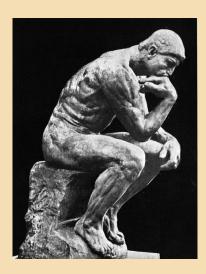
What is the best method for reducing MRSA infections in a hospital environment?

To find out, a <u>study</u> was conducted amongst 43 hospitals in their intensive care units. They tested 74,000 patients over an 18 month period. Three different methods of MRSA control were used to find out which worked the best. They were:

1. Screen patients for MRSA, if positive, use isolation



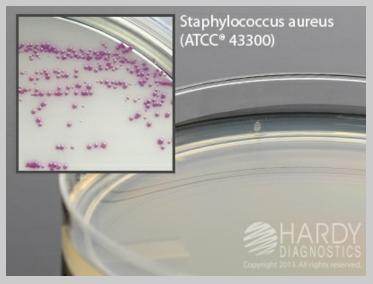
Think about it...



- * Why do scientists call it <u>re</u>search when looking for something new?
- * If vegetarians eat vegetables, what do humanitarians eat?
- * Why is it, when a door is open it's ajar, but when a jar is open, it's not a door?
- * Why do we put suits in a garment bag and put garments in a suitcase?
- * If a man is standing in the middle of the forest speaking and there is no woman around to hear him, is he still wrong?
- * If a deaf person swears, does his mother wash his hands with soap?

techniques.

- 2. Screen patients for MRSA, if positive, isolate them and decolonize them. These patients were bathed daily with a 2% chlorhexidine containing cloth, and had an antibiotic ointment of mupirocin applied twice daily inside their nose (the body site most commonly colonized with *S. aureus*) for 5 days.
- 3. Do not screen. Decolonize all patients immediately upon admission to the ICU as described above.



MRSA (Methicillin Resistant Staphylococcus aureus) growing on a <u>HardyCHROM MRSA</u> agar plate.

As it turned out, the first method made no impact. The second method brought about a 23% reduction in all septicemias. The third method showed an amazing 44% reduction in all septicemias including those caused by MRSA. The incidence of MRSA colonization on these patients was reduced by 37%.

There are about 80,000 cases of invasive MRSA infections per year, resulting in about 11,000 deaths annually. MRSA, and Staphylococcus in general, account for approximately one-quarter of the 80,000 deaths from hospital-acquired infections in the U.S. Using the above method, bloodstream infections can now be reduced by up to 44%; a significant advance in the battle against MRSA.

* * *

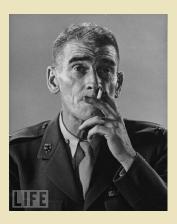
Optical oddities...

Phraseology

"Gung Ho"

The phrase Gung Ho, meaning zealous or eager, is an adaptation of the Chinese "kung" meaning work, and "ho" meaning together.

The Anglicized term "gung ho" became widely known in English as a slogan that was adopted in WWII by the United States Marines under General Evans Carlson, who led a band of raiders at the battle of Guadalcanal in the Pacific.



In an interview Carlson said, "I was trying to build up the same sort of working spirit I had seen in China where all the soldiers dedicated themselves to one idea and worked together to put that idea over. I told the boys about it again and again. I told them of the motto of the Chinese Cooperatives, Gung Ho. It means Work Together-Work in Harmony.."

His motto caught on and his men began calling themselves the Gung Ho battalion, which later became the title of a 1943 war film.



Hiding amongst the coffee beans are three lady bugs and three baby faces.

Can you find them?

Need help?

"Believe half of what you see and none of what you hear." ~ Marvin Gaye ~

View the survey results...

Should there be government controls on soda consumption?



Recent <u>studies</u> link the rapidly increasing consumption of high fructose corn syrup (HFCS) in soft drinks to the alarming obesity epidemic in America. Fructose is different than glucose in that it is metabolized directly in the liver into fat, and it does not stimulate the production of insulin or leptin which causes a feeling of satiety, which tell us to



Wisdom to ponder...



Edmund Burke

1729 ~ 1797

Irish statesman that served in the British House of Commons, where he was one of the few that supported the American Revolution.

"The only thing necessary for the triumph of evil is for good men to do nothing."

"Those who don't know history are destined to repeat it. "

"Education is the cheap defense of nations."

stop eating.

New York City recently passed a law that would ban non-diet sodas larger than 16 ounces from being served.

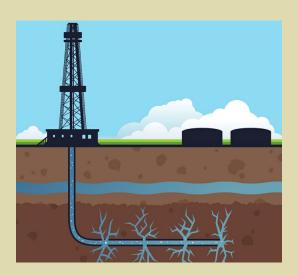
However, a month ago the New York State court of appeals struck down the law. The judges wrote that while the City had the power to ban "inherently harmful" foodstuffs from being served to the public, sweetened beverages didn't fall into that category.

Find out what the MicroBytes readers thought about this...

* * * * *

Voice your opinion...

Do the benefits of fracking outweigh the risks?



Hydraulic fracking is the technique in which typically water is mixed with sand and chemicals, then is injected at high pressure into a well to create small fractures along which gas and petroleum can migrate and be available for extraction. Fracking has been successfully used to extract oil for over 60 years.

As of 2012, 2.5 million hydraulic fracturing jobs had been created worldwide, more than

"Nothing turns out to be so oppressive and unjust as a feeble government."

"Nobody made a greater mistake than he who did nothing because he could do only a little."

"If we command our wealth, we shall be rich and free; if our wealth commands us, we are poor indeed."

* * * * *

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Our Products
Company History
More About Us



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Want to review past issues of MicroBytes?

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Did you know?



Hardy Diagnostics...

Manufactures over <u>3,500</u>
 <u>microbiology products</u> for you to choose from.

one million of them in the United States.

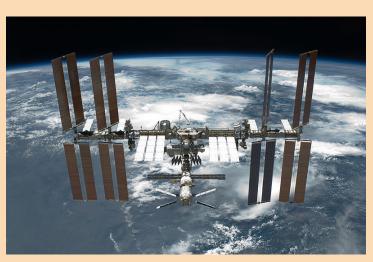
Opponents point to potential environmental impacts, including contamination of ground water, depletion of fresh water, increase in green house gas, risks to air quality, noise pollution, the migration of gases and chemicals to the surface, and the health effects they may cause.

Proponents say that the U.S. could be energy self sufficient by 2020 if we took advantage of the fracking technology. The impact of fracking has already been felt. The U.S. imported 41% of its oil in the first five months of 2013, the Energy Department says, down from 65% in 2005.

Tell us what you think...

Hardy goes into orbit!

In an effort to study the effects of space travel on human health, a Hardy Diagnostics product is on an expedition to the International Space Station.



The International Space Station as seen from the Space Shuttle Endeavor.

The NASA microbiome experiment, sponsored by the J. Craig Venter Institute, is studying the changes that occur in microbes in and on the body during a space mission.

A microbiome is the entire array of living microorganisms in a particular environment. Researchers hope to understand whether these

- Stocks over <u>13,000 laboratory</u> <u>products</u> to increase your selection.
- Is celebrating its 33rd year of serving microbiologists.
- Maintains <u>eight distribution</u>
 <u>centers</u> in the U.S. for faster turn
 around time to your lab.
- Is <u>ISO 13485</u> certified for the manufacture of medical devices to give you confidence in our products.
- Offers you its technical manual, <u>HUGO</u>, which contains over 4,500 pages of information regarding microbiology.
- Services over 9,000 labs and maintains a worldwide network of over 40 distributors.

View a <u>Corporate Profile.</u>
See the <u>Company Video.</u>
Send a message to the president.





"Adulthood is like going to the vet...

and we're all like dogs that were excited for the car ride

changes in space will result in health risks for astronauts.

Astronauts will use the Hardy Diagnostics' products to sample the microbiome in their armpits and other body sites, as well as the microbiome of the surfaces within the International Space Station.

These samples will be compared to samples taken under normal conditions before the mission began. The study will also monitor astronauts' stress levels, immune system, perspiration, blood, and gastrointestinal samples.

In addition, the astronauts' sleeping areas, exercise areas, and water and air supplies will be swabbed and tested for microorganisms.



Demonstrating the use of Hardy's <u>Swab</u> <u>Rinse Kit</u> now used on the International Space Station.

It is hoped that as a result we will have a better understanding of how microbes grow under the conditions found in space, which could lead to discoveries that could be of benefit to earthbound humans as well.

* * * * *

RUBES

until we realized where we're going."

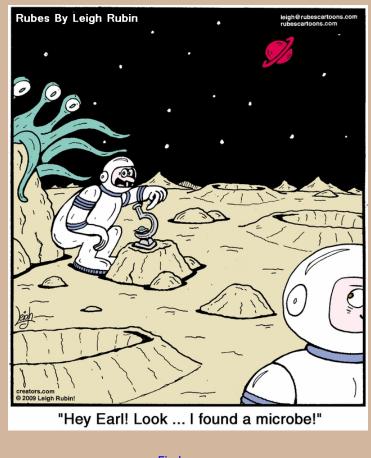
* * *



"Life is a shipwreck...
but we must not forget to
sing in the lifeboats."

~ Voltaire ~

* * *



Find more of Leigh Rubin's cartoon humor.

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!



"When I look back on all my worries,
I remember the story of the old man
who said that he had lots
of issues in his life...
most of which never happened."

~ Winston Churchill ~