

# SILVER NEWS

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SECOND QUARTER 2006

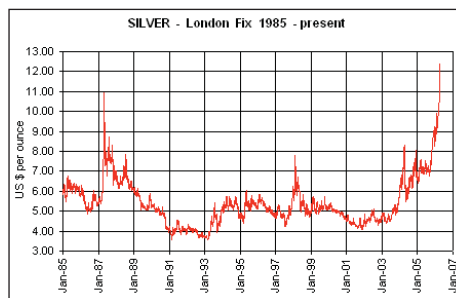
## Several Silver Investment Vehicles On Tap

Barclays Plc's iShares Silver Trust (symbol SLV), an Exchange-Traded Fund designed to track the metal's price, was offered to the public on April 28 after being approved by the US Securities and Exchange Commission. The ETF is traded on the American Stock Exchange. Just prior to the offering Barclays placed 1.5 million ounces of silver with a custodian to back up the ETF.

The silver ETF will track the price of silver, like an index mutual fund tracks the price of stocks with in it, but the ETF will trade like a stock, rising and falling throughout the trading day.

Anticipation of the ETF and other factors pushed silver to a 23-year high in mid-April: US\$14.68, the highest price since October 1983.

Meanwhile, other exchanges are showing interest in silver instruments. A silver-backed ETF is expected from ETF Securities for listing on the London Stock Exchange. Unlike the offering from Barclays, this silver ETF will not be backed by physical silver. Instead, the fund is expected to buy silver-backed securities from a third party rather than the physical metal.



KITCO

At the Dubai Gold and Commodity Exchange, officials are ready to launch a silver contract worth 1,000 ounces of silver of 99.9 percent fineness, deliverable at approved vaults in the United Arab Emirates. The silver contract is expected in May, and exchange officials say they expect about 20,000 contracts by year's end. The Exchange expects to allow options on contracts later this year.

Refiners certified by the Dubai Metals and Commodities Center for the Dubai Good Delivery Standard for silver bars include, so far, Johnson Matthey, Salt Lake City; Matsuda Kangyo Co. Ltd.; Sumitomo Metal Mining and Tanaka KK from Japan; Metalor Technologies SA and PAMP SA in Switzerland and the Rand Refinery, South Africa.

## Silver Added to GoldMoney.com Website Customers Can Buy Physical Silver On Line

GoldMoney has sold more than 1.3 million ounces of silver in the first quarter of this year, according to James Turk, the company's founder and chairman. "We exceeded our expectations, and we believe sales will continue to do well," he said of the offering that began January 1. Turk noted that the offering was in response to current GoldMoney customers who wanted to buy physical silver. "As people become more worried about the US dollar, they look to buy precious metals. This is a way for them to buy silver."

All silver is held in special bullion vaults near London, England, and is insured by Lloyd's of London. Customers holding more than 1,000 oz. of silver in their accounts can even take possession of the metal if they wish. There is no minimum or maximum amount to buy and customers are charged storage fees and other fees based on how much silver

they purchase and own.

Customers can buy silver by logging onto their GoldMoney account at [www.goldmoney.com](http://www.goldmoney.com), choose the amount of silver they wish to purchase and the currency to pay for their purchase. Customers paying in US or Canadian dollars can have their costs automatically deducted from their bank accounts. In addition, customers may sell their silver at the current spot rate for any of the four national currencies and 'goldgrams' that are provided 24/7 on the GoldMoney website.

Turk said that the company has not turned on the 'silvergram' feature which would allow customers to spend silver on line in the same way they can spend gold with 'goldgrams.' "We're not sure yet if our customers want this feature. This could change," he said.

# Health Agencies in New York, Maryland and Pittsburgh Approve Silver/Copper Ionization to Control Legionnaire's Disease in Hospitals

By Samuel Etris, Senior Technical Consultant to The Silver Institute

The Departments of Health of the states of New York, Maryland, and the Allegheny County Health Department, Pittsburgh, Pennsylvania, have approved silver/copper ionization as a primary treatment for long-term control of *Legionella* in hot and cold water systems in hospitals and nursing homes.

The state and county guidelines confirm the decades-long experience in the eradication of *Legionella pneumophila* contamination in the water lines of more than 100 hospitals in the US and Canada by silver-copper ionization systems. Their success has been documented in the medical literature.

Following the outbreak at the 1976 American Legion convention in Philadelphia, the Centers for Disease Control discovered that *Legionella pneumophila*, far from being unique to the air conditioning system of the convention hotel, could be found in lakes and elsewhere. Its ubiquitous presence provided a permanent hazard to hospitals and nursing homes as well as fountains, hotels and industry, as the organism induces a form of pneumonia so severe that 20 percent of those infected do not survive.

An article in *The New York Times* on May 3, 2005 reported: "The bacteria [*Legionella pneumophila*] have now been detected in as many as three city hospitals in two months, highlighting what experts said was a barely visible but potentially deadly problem plaguing hospitals in the city... about 70 percent of the hospitals in New York State would find the bacteria if they looked for it, and many patients probably die from the disease without anyone knowing."

"Silver provides one of the most active, but controlled, biocide agents known to biologists," said Dr. Albert T. Mc Manus, former Chief of Microbiology, US Army Institute of Surgical Research in Fort Sam Houston, Texas. "When metallic silver releases an electron (as it oxidizes a compound) to become a soluble ion, it forms insoluble salts with whatever carboxyls, sulfhydryls, phosphates, sulfates, anionic amino acids, and proteins are present in a bacterium. The silver salts of these compounds are so insoluble that should these compounds be required for function of a biologically active organism, the result is permanent inactivation. Silver also replaces calcium, magnesium, and other similar cations within a microorganism, resulting in permanent dysfunction unless that organism can make a replacement molecule."

Realizing that domestic water distribution systems were

linked as a major source of *Legionella*, T.P. Technology, Enrich Products, Inc., Pittsburgh, Pennsylvania, supported a study conducted at the University of Arizona's Department of Microbiology and Immunology showing that silver and copper ions effectively control the organism. As a consequence during the past several years, hospitals across the country have installed T.P. Technology silver/copper ionization systems, certified for efficacy by the National Sanitation Foundation (NSF International) for controlling waterborne pathogens, including *Legionella*.

Hospital plumbing in particular has many dead ends and stagnant areas, especially in hot and warm water storage tanks. In the past, purging disease organisms from these locations has been done by either charging with high concentrations of chlorine or by scalding water flushing. The drawback to chlorine is that it must be flushed out before being replaced with potable water, and it is extremely corrosive to piping and equipment. In addition, it only suppresses but does not kill many organisms such as *Legionella* and provides no residual protection. Scald-water flushing consumes excessive energy, is labor intensive, time consuming and does not reach into all the dead end piping.

It is widely recognized that in-building water distribution systems are the major reservoirs for hospital-acquired Legionnaire's disease. As a result, more than 100 leading hospitals in the US have installed silver/copper ionization systems to eradicate *L. pneumophila* from their hot water recirculation lines. Many have had their systems running for eight years providing safe water systems. The advantages of silver/copper ion systems are easy installation and maintenance, non-toxic by-products well below EPA standards, and a stable and easily measured disinfectant residual unaffected by higher temperatures (unlike chlorine and ozone which are degraded by higher temperatures).

Silver and copper ions penetrate the biofilms that build up in hospital plumbing by attacking the harbored *Legionella* organisms. Furthermore, silver and copper ions are stable, providing a long-term margin of safety. As a test, after achieving zero positive cultures, the silver/copper ionization system in one hospital building was intentionally turned off to allow the water system to recolonize with *Legionella*. The residual silver and copper ions in the system blocked recolonization for more than two months.

## New Fabric Offers Relief for Skin Sufferers Silver Gives Bacteria and Odor Protection

People with dry, itchy skin caused by diseases such as eczema or psoriasis – more than 30 million sufferers in the US – may be helped by a newly-introduced fabric called DermaSmart which is also imbedded with silver particles to prevent the growth of bacteria and odor.

Milliken & Company officials say that the soft, silky, breathable fabric reduces the friction or drag of the fabric against skin offering an additional avenue for relief. "DermaSmart has demonstrated in lab tests and in studies with patients to be a better choice of fabrics than the traditionally-recommended 100% cotton, both for comfort and for relief of symptoms," said Lyn Murajda, Brand Manager for the Apparel & Specialty Fabrics Division of Milliken.

Additionally, each shirt and pant has smooth, flat seams and a 'tagless' size label. Pants have covered waistbands, features which keep the clothing construction from irritating the skin.

"Two of the most vexing problems confronting patients with eczema, atopic dermatitis and psoriasis, aside from their disease, are how to dress and how to get a good night's sleep," said Dr. Zoe Diana Draelos, a dermatologist based in High Point, North Carolina. "And clothing plays a large contributing role in this. Wearing a smoother, less irritating fabric directly against the patient's skin helps to reduce the irritation and itching, and this allows the oral and topical treatments to work more efficiently."

For more information go to [www.DermaSmart.com](http://www.DermaSmart.com)

## Samsung Offers New Silver-Based Air Conditioner and Washing Machine Models

Samsung has introduced several new silver-based home appliances including an air conditioner for the Middle East market and a washing machine for US consumers.

The air conditioner is part of the company's 'Prestige' series and is available in 12 models. The new air conditioners employ Digital 'i' technology, a large circular LED (light emitting diode) display that allows consumers to monitor the 'health' conditions of the room, encompassing current operation mode, power and the room temperature. In addition to Digital 'i', the new air conditioners are equipped with bionizers and the company's trademark Silver Nano Health System to prevent the growth of fungus and mold bacteria. Air conditioners are notorious for harboring bacteria in pipes and other air exchange equipment when they remove moisture from a room and discard it through pipes to the outside.

Samsung is also extending its silver-based washing machine line. US consumers will soon be able to buy 'SilverCare' washing machines that have been available elsewhere for several years. The front-loading washer will retail for \$1,399 and inject silver ions into the tub during the wash and rinse cycles to sanitize clothes. The machine works with cold water and no detergent or bleach is necessary. In tests, the cleaning process removed or killed 99.9 percent

of odor-causing bacteria, including E. coli, Samsung officials said.

According to company officials, the silver ion washing machine is well suited to the US style of washing clothes because most people wash in cold or warm water without bleach. Many researchers say that this practice results in clean but wet laundry that contains significant levels of bacteria especially when the clothes are left inside the washing machine for extended time periods before placing in a dryer.

The company also notes that its SilverCare product line uses less energy than hot-water cleaning and handles delicate items more gently. The silver ion process also is hypo-allergenic.



S A M S U N G

US consumers will soon be able to buy Samsung's 'SilverCare' washing machines that use silver ions instead of detergents to clean fabrics.

## Blood Clotting Powder Used in Iraq and Afghanistan Battlefields Modified by Silver for Civilian Use

A clotting powder called QuikClot was developed for the US military and given to every marine in Iraq and Afghanistan to cut down on the number of soldiers who bleed to death on the battlefield. Silver will play a major role as this technology is modified for use by paramedics and other first responders.

QuikClot speeds coagulation of blood, even in large wounds, through a very simple process: It physically adsorbs the liquid from blood, thereby concentrating the clotting factors and encouraging rapid clotting to stop the bleeding.

Although the powder works well, it has one characteristic that limits its use. It heats up upon contact with blood. Although field tests suggest that soldiers severely wounded by gun shots are more worried about bleeding to death than receiving a burn, the issue had to be resolved before it could be used widely in civilian applications.

University researchers working for Z-Medica Corporation found that they could fine tune the amount of heat released by the product by adding silver. They learned that heat was released when positively charged calcium ions in the powder mixed with water molecules in blood and on the victim's skin surrounding the wound. By replacing some of the calcium ions with silver ions they could regulate the amount of heat the powder generated. They did not want to eliminate all of the heat, because warmth increases the clotting process.

Silver not only mitigated the heat, but silver ions added the benefit of anti-bacterial action.

Currently BattlePack — a kit that includes QuikClot brand hemostatic agent and bandages — is in the United States Marine Corps trauma kit, and civilian paramedics including those in Tampa, Florida, and other cities use a modified version.

Company officials say they are developing a new product with silver and one with another heat reduction chemical that would be less expensive than the silver ion product.



Z - M E D I C A C O R P O R A T I O N

Silver is helping to modify blood clotting powders as they move from military to civilian use.

# Anti-Microbial Fittings for Anti-Microbial Tubing Available

**E**ldon James Corp. in Loveland, Colorado, manufacturer of tubes and fittings for applications in industries ranging from beverage dispensing to medical products, is offering a line of silver-based fittings designed to offer protection against microbial and bio-film buildup on the interior and exterior surfaces of the fittings.

Company officials say that the products are not designed to sanitize the liquids traveling through the pipes and fittings but to protect the fittings and tubing from colonization by bacteria, mold, mildew and fungi which can cause odors and lead to product deterioration and discoloration.

ELDON JAMES CORP.



Silver imbedded in plastic fittings and tubing prevents bacteria and biofilm buildup and decreases maintenance downtime in industrial applications.

The fittings are colored blue, to distinguish them from the company's non-bacterial fighting products, and they complement the company's line of 'Flexelene' Silver antimicrobial tubing. The fittings come in Natural Nylon, Natural Polypropylene, Natural High Density Polyethylene and Natural Kynar.

The Flexelene tubing and fittings and pipes use AgION technology. Applications include pure water transfer, water purification, water bottling, beverage lines, beer dispensing, dairy processing, pharmaceutical manufacture, bioscience, ice making technologies, drinking fountain systems, water dispensing kiosks and food dispensing systems. All tubes and fittings meet Food and Drug Administration standards for use in food and beverage applications.

## Pre-Order Your Copy of World Silver Survey 2006

**T**he World Silver Survey 2006 will be released by the Silver Institute on May 24, and readers may pre-order copies immediately.

GFMS Limited, the London-based precious metals research firm, will produce this comprehensive annual study of the global silver market for The Silver Institute, which has been publishing it since 1990.

The information within the Survey is based in part on analysis of the GFMS database of international trade statistics, company report data and other public-domain information. More importantly, it is also based on a series of interviews, carried out every year by the GFMS team of analysts and consultants, with key industry players who provide the essential data for reliable estimates of world silver supply and demand.

To pre-order your copy, please email us at [info@silverinstitute.org](mailto:info@silverinstitute.org)

### For Future Reference Silver Prices 1979-2006

2006	High	Low	Average
Apr	14.50	11.67	12.63
Mar	11.62	9.71	10.40
Feb	9.84	9.10	9.52
Jan	9.85	8.82	9.18
2005	High	Low	Average
Dec	9.00	8.31	8.63
Nov	8.35	7.44	7.87
Oct	7.83	7.38	7.68
Sep	7.50	6.94	7.18
Aug	7.28	6.69	7.01
July	7.24	6.83	7.02
June	7.53	7.03	7.31
May	7.44	6.84	7.05
Apr	7.33	6.90	7.13
Mar	7.60	6.91	7.27
Feb	7.52	6.55	7.07
Jan	6.85	6.43	6.63
Year	High	Low	Average
2004	8.21	5.51	6.67
2003	5.98	4.35	4.89
2002	5.11	4.22	4.60
2001	4.81	4.03	4.36
2000	5.55	4.56	4.97
1999	5.76	4.87	5.22
1998	7.26	4.62	5.51
1997	6.34	4.16	4.88
1996	5.82	4.68	5.18
1995	6.10	4.38	5.19
1994	5.78	4.57	5.28
1993	5.44	3.52	4.30
1992	4.32	3.63	3.94
1991	4.55	3.51	4.03
1990	5.35	3.94	4.82
1989	6.20	5.02	5.47
1988	8.06	6.01	6.53
1987	11.25	5.35	6.99
1986	6.32	4.85	5.49
1985	6.89	5.48	6.14
1984	10.17	6.25	8.15
1983	14.74	8.38	11.46
1982	11.30	4.81	7.93
1981	16.53	7.97	10.53
1980	50.35	10.20	20.66
1979	35.00	5.93	11.20

(COMEX settle)

### The Silver Institute El Instituto de la Plata

INCORPORATED 1971

A WORLDWIDE ASSOCIATION OF SILVER MINERS,  
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