

Email subject line: **Reproducible Results Are No Sweat With Pickering Labs Artificial Perspiration**

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## **NEWS RELEASE**

### **FOR INFORMATION CONTACT:**

Michael Gottschalk, Marketing Manager

Pickering Laboratories, Inc.

800-654-3330 or 650-694-6700

[mgottschalk@pickeringlabs.com](mailto:mgottschalk@pickeringlabs.com)

XXX KB JPEG image of Artificial Eccrine Perspiration

X.X MB Zip file for EPS image of Artificial Eccrine Perspiration

## **PICKERING LABORATORIES ARTIFICIAL PERSPIRATION ASSURES REPRODUCIBLE TESTING!**

### *STANDARDIZED ARTIFICIAL ECCRINE PERSPIRATION SOLUTION GUARANTEES REPRODUCIBLE RESULTS*

MOUNTAIN VIEW, Calif. – September 11, 2007 – Pickering Laboratories, a leader in the design and manufacture of specialized analytical reagents, instruments and solutions for the environmental, pharmaceutical and biochemical laboratory markets, announced immediate availability of its newly formulated line of artificial eccrine perspiration.

Perspiration mimics have long been used by many industries to “sweat test” products such as textiles, dyes, cosmetics, credit cards, shoe leather, jewelry, and fingerprint forensic reagents. Usually, a sweat mimic is concocting at the time of the test from a formula that may vary with time and industry. Usually, such sweat mimics contain only a few of the ingredients of natural perspiration.

Pickering Laboratories was inspired by such tests to develop a standardized artificial eccrine perspiration solution that guarantees that tests are reproducible. Pickering Labs artificial perspiration was synthesized after an extensive analysis of natural perspiration. Their investigation has shown that natural perspiration is a complex solution. Pickering Labs artificial perspiration contains nine minerals, including sodium, copper, potassium and magnesium, and three metabolites, uric acid, lactic acid and urea along with 20 amino acids. All components are normalized to the same proportions that they are found in natural perspiration.

While artificial perspiration contains the same metabolites as natural perspiration (uric acid, lactic acid and urea), eliminating the preservative component allows more metabolites to be produced by natural flora in some test situations. To facilitate tests on such materials as leather or cosmetics where cultures may develop, custom orders are available that are sterile and delivered frozen without a preservative. Reproducibility is guaranteed for Pickering Labs artificial eccrine perspiration stock solutions as well as custom orders.

### **Reproducible Results Anywhere, Anytime**

A typical example of sweat testing in the jewelry industry is to determine the amount of nickel released by perspiration from alloys of gold, nickel and palladium called “white gold.” The nickel leached from these alloys by natural perspiration can cause allergic reactions. Increasing the amount of palladium in the alloy helps prevent the release of nickel, but palladium is very expensive. The problem is thus to determine how much palladium is necessary to keep the level of nickel released to a safe level.

To test how much nickel is released from the surface of a particular alloy, samples of the alloy are immersed in a sweat mimic for weeks at a time. The resulting solution is then tested for nickel. The problem is that results vary widely from lab to lab. This makes a “standard” difficult to define. The lack of reproducibility of the sweat mimic is certainly one of the culprits.

The **American Society for Testing and Materials** (ASTM) describes mechanical procedures to test many products in the presence of a sweat mimic. According to Michael Pickering, CEO of Pickering Laboratories, "We were guided by such tests to develop an artificial perspiration that can be delivered anywhere at anytime yielding reproducible results."

Reproducible artificial perspiration solutions are paramount to forensic fingerprint investigation. Latent prints are made visible by reagents like ninhydrin that dye amines found in eccrine perspiration. To test that a null result is actually the absence of prints and not the results of the detection chemistry, its interaction with the surface or surface contaminates, Crime Scene Investigation technicians make a control print of their own finger on a similar surface. To standardize this control print, Crime Science, Inc. offers Swetcheck™ artificial perspiration manufactured by Pickering Labs and dispensed in single-use sterile swabs.

## **Applications**

Consumer products testing laboratories and manufacturers that do sweat testing on materials such as textiles, dyes, cosmetics, credit cards, jewelry and metals, coatings and finishings, polymers, leather, wood, fingerprint forensic reagents, and any other testing application that would benefit from guaranteed reproducible results with artificial perspiration.

## **Pricing and Availability**

Besides swabs, Pickering Labs offers artificial perspiration in 200mL, 250mL and 950mL bottles. Samples are available in 5mL bottles.

Regular orders are prepared fresh with a preservative and have a 1-year self-life. Custom orders are available in a wide variety of containers and dispensers.

Natural perspiration has a pH that ranges from 3 to 5. Regular Pickering Labs artificial perspiration has a pH of 4.5, but it can be custom ordered with any pH between 3 and 8.

Contact Pickering Laboratories for pricing information.

## **About Pickering Laboratories**

Pickering Laboratories is a pioneer in biochemical reagents and instrumentation. For 25 years Pickering has developed applications required by government and private laboratories. Pickering leadership in both the design and manufacture of biochemical reagents and instrumentation assures the quality of both.

Pickering's team of dedicated research and application chemist, engineers, operational specialists, and experienced managers produce and sell direct and through 87 distributors in 150 countries in North and South America, Europe, the Middle East, Africa, Asia, and the Caribbean. Headquarters are in Mountain View, California.

Consumer products testing laboratories and manufacturers are invited to contact Pickering for artificial perspiration needs analysis. Phone 800-654-3330 or 650-694-6700. Fax 650-968-0749. E-mail: [sales@pickeringlabs.com](mailto:sales@pickeringlabs.com). Website: [www.pickeringlabs.com](http://www.pickeringlabs.com).

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