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Bradley Krantz, a laboratory supervisor at Corrosion Testing Laboratories, Inc., in Newark, displays a pack of U.S. coins being tested in a humidity controlled environment. One day of the lab's tests can equal five years of real-world usage.

Dollar coin has lackluster entrance

Critics say piece dulls too quickly

By **DOUGLAS HANKS III**
Staff reporter

With the tarnished debut of the new "golden dollar," there is a question: Should Newark share any of the blame?

The answer rests with Corrosion Testing Laboratories, the Newark lab hired by the U.S. Mint to test the gold-colored coin for wear and tear.

Recent weeks have seen a sprinkle of bad press for the United States' second try at a contemporary 100-cent

piece to pick up where the disappointing Susan B. Anthony dollar fell 20 years ago. The new coin, bearing the face of Lewis and Clark guide Sacagawea, has seen some troubles, too.

Critics say it loses its shine quickly, smudges with fingerprints and is pocked by grungy spots.

Newark's Corrosion Testing Laboratories gave the coin high marks last year, but scientists there are not saying "Oops." More like: Sigh.

Problems with the 'golden dollar'

■ **Grungy spots** almost like mildew. The U.S. Mint blamed them on an acid wash that was not rinsed off. It only affected an early batch of coins.

■ **Surface shows smudges like fingerprints**

Corrosion Testing Laboratories spotted this problem. The Newark lab said most golden coins across the world show prints.

■ **Sacagawea face tarnishes quickly**

Corrosion Testing said its research showed the Sacagawea dollar holds up better than a penny, and should not tarnish for at least a year. Some collectors say the coin is already fading. The mint called the loss of shine an "antique patina."



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Coin: Lab finds test batch tainted

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"Nobody ever complains about a penny turning brown," said Richard A. Corbett, the former du Pont researcher who quit to start his own lab in 1984.

Except for the spots — which the mint blamed on an acid wash that was not rinsed for an early batch of coins — Corbett said the golden dollar is holding up as expected.

Its biggest problem is public relations, Corbett said. Coins just are not used to this kind of scrutiny.

"All your other coins have been in existence for decades," said lab supervisor Bradley Krantz.

Things got bad enough that last week the mint issued a press release embracing the tarnish as an "antique patina" that will "accentuate the profile and add a dimension of depth to the depiction of Sacagawea and her child."

Though it's a staple in many foreign currencies, the United States has not had a golden coin since Franklin Roosevelt recalled the country's gold coins in 1933. The golden dollars are copper, but to achieve the golden color the mint had to create a new mix of metal.

Government scientists fiddled with different combinations of zinc, manganese, nickel and copper to find a brass that was durable and shiny. They named their creations alphabetically, moving on to the next letter after scrapping the previous one.

Corrosion Testing's work started in August with Alloy N.

The mint contacted the lab on Blue Hen Drive in August, knowing its Delaware location would be



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This is the U.S. dollar coin after corrosion tests in Newark. The government contracted Corrosion Testing Laboratories in August.

a perfect drop-off spot as officials traveled from the Philadelphia Mint to Treasury headquarters in Washington. There were not many options. Corrosion Testing, which employs 12 people and had \$1 million in revenues last year, is one of the few independent metal testing labs in the country.

The mint first sent the lab a batch of Alloy N test coins, make-believe currency from 1759 featuring Martha Washington.

Alloy N did not hold up to the lab's tests. Dozens of the test coins were put in an aquarium or sealed chamber for a week, punished by chemicals and vapors designed to simulate a sweaty palm, a salt-water fountain, air pollution and a humid drawer. In the lab's experi-

ments, one day of exposure usually equaled five years in the real world. The mint expects coins to last 30 years before losing their features.

Alloy O flunked, too. Same with P and R. By September, Corrosion Testing thought Q was a winner.

Not perfect, though.

Tests showed the dollar coin would tarnish in a matter of years. That didn't concern the lab because a half dollar tarnished at the same rate, and a penny tarnished in about half the time.

The lab also noticed the golden dollar smudged easily, but shrugged that off because all golden coins do.

One problem did trouble Corbett's staff: the batch of coins that arrived speckled by corrosion.

"We were telling them these coins were unacceptable because they had spots on them," he said.

The mint said it had caught the problem, but too late for the first batch of coins to hit circulation.

None of this has seemed to dull the coin's popularity — at least as a novelty. The mint says most people who get their hands on the new dollar are hoarding them as collectibles.

"I don't know anyone who has received one in actual circulation," said John Darmanin, a coin collector in Claymont who came by his first Sacagawea dollar by way of a Cheerios box prize. He's since gotten some from his bank.

"I wouldn't say they're hard to get," he said. "But all you have to do is try."

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