

A Scanner That Could Save Your Skin

By THE ASSOCIATED PRESS

Published: June 20, 2006

Filed at 4:38 p.m. ET

CHARLOTTE, N.C. (AP) -- The mirror on the wall might be able to tell who's the fairest of them all, but BrighTex Bio-Photonics LLC's scanner can tell a whole lot more.

Applying technology used for inspecting semiconductor wafers for defects, BrighTex developed the Clarity Pro facial image scanner, which claims to identify bacteria-clogging pores, show where wrinkles are forming and identify skin damage caused by the sun.

The scanner is the size of a TV set, with a large oval cavity for the user's face. Targeted at beauty spas, dermatologists and cosmetic companies, the scanner sells for \$20,000. A handful of unidentified cosmetic companies have bought it so far.

BrighTex, a San Jose, Calif.-based start-up, hopes to create a cheaper version for home use. Someday, the company even envisions its technology being built into cellphones or laptops so consumers can get an analysis of their skin on the go.

There are other products on the market that show where sun damage has occurred, but Rajeshwar Chhibber, founder and chief executive of BrighTex, says nothing available today can provide the amount of detail Clarity Pro does.

"We have developed algorithms which can recognize features and shapes and the significance of things before something develops fully," says Chhibber. "When it's in the 5 percent stage, we can tell what it will turn into." That means the product can tell if a wrinkle just starting to form will turn into a deep wrinkle or a fine line.

After taking a white light and UV image of a person's face, that image is entered into a software program to detect damage. In the case of clogged pores, Clarity Pro can identify what type of bacteria is in the pores and predict where acne will form.

For sun damage, the facial scanner can tell how much damage is under the skin, how long a person can stay in sun before the skin is damaged more and forecast the chances of a person getting skin cancer due to harmful UV rays.

Chhibber, who founded the company in January 2005, comes from a semiconductor background and said the leap from detecting defects in wafers to defects in faces wasn't that big. "To me inspecting a face or a wafer is very similar," he says, since in both cases you have to look for the tiniest of defects.

Clarity Pro can also be used to monitor the progress of a particular facial cream to see if it is reducing wrinkles or improving sun damage. For the cosmetics field, Chhibber says a future product will be targeted toward research and development departments and may result in better creams and lotions.

"The cosmetic industry is waiting for something like this but nobody came forward," says Chhibber.

John Bailey, executive vice president of science at the Washington-based Cosmetic Toiletry and Fragrance Association and former director of the Food and Drug Administration's cosmetics and colors office, says if BrighTex's technology does work, it would be valuable for the cosmetic industry, which is always looking for ways to develop better products.

Still, Bailey noted that like other facial scanning products on the market for skin analysis, Clarity Pro would need to be validated to prove it can truly predict problems with the skin.

BrighTex says that today the market size is between \$70 million and \$100 million worldwide. That has the potential to grow to a billion-dollar-plus market over the next three years.

The Clarity Pro product comes at a time when Americans are much more aware of sun damage and are paying more attention to skin care. It also comes against a backdrop of rising cases of skin cancer in America.

According to the Skin Cancer Foundation, more than 1.5 million skin cancers are diagnosed each year in the United States. Nationally, there are more new cases of skin cancer each year than the combined incidence of breast, prostate, lung and colon cancers. The incidence of melanoma, which is the deadliest form of skin cancer, is increasing faster than any other cancer. By 2010, the foundation projects that one in 50 Americans will get melanoma.

Because of those projections, David Goldberg, vice president of the New York-based Skin Cancer Foundation and clinical professor of dermatology and director of Mohs Surgery and Laser Research in the Department of Dermatology at New York's Mount Sinai School of Medicine, says a product like Clarity Pro would be welcome.

"Any technique that is going to lead to early detection of skin cancer is going to save lives and save the need for more extensive radical surgery," says Goldberg, noting that consumers will likely want a product that can give a detailed skin analysis at home.