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Could Embedding a Magnifier Lens into Labels Improve Their Readability?

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A recent survey of more than a hundred U.S. consumers over 40 years of age finds that more than 80% have trouble reading small print on labels. Jim Rittenburg, Co-Founder of IC Optix (www.ic-optix.com) ^[5], considers this a significant patient safety concern—and has a solution in mind.

“Important information on the labels and packaging of many products, and particularly medicines, is difficult or impossible for many people to read without the use of some type of vision aid,” says Rittenburg, who previously worked in the product authentication side of labeling for more than 20 years. “Issues relating to readability of drug labeling is known to be a significant source of medical error.”

IC Optix conducted the survey, which included the responses of 125 people. Rittenburg believes that conveniently placed vision aids could help vision-impaired consumers, and in the survey his company found that 75% of respondents would use a magnifier if included with a product.

Rittenburg tells *PMP News* that his company has patented a new type of label technology integrating a magnifier lens, and there are some product security benefits, too. “Our technology provides a very unique combination of user functionality and product security that provides a value-add feature to the consumer/patient and that also allows them to get involved in the authentication process,” he explains.

The layer featuring the lens can be peeled up to magnify the label, allowing patients to read small text, and then reapplied for multiple uses.

Fixed or variable information can be printed anywhere on the lens film (topside or underside) or on the label layer beneath the lens film, Rittenburg says. “We are using a standard polyester label material (PET) for the lens, which is ink receptive,” he says. “The materials for the magnifier label (e.g., film, lacquers, adhesives, etc.) are the same materials that are normally used for label production. Therefore, there are no new materials or chemistries being introduced into the process.”

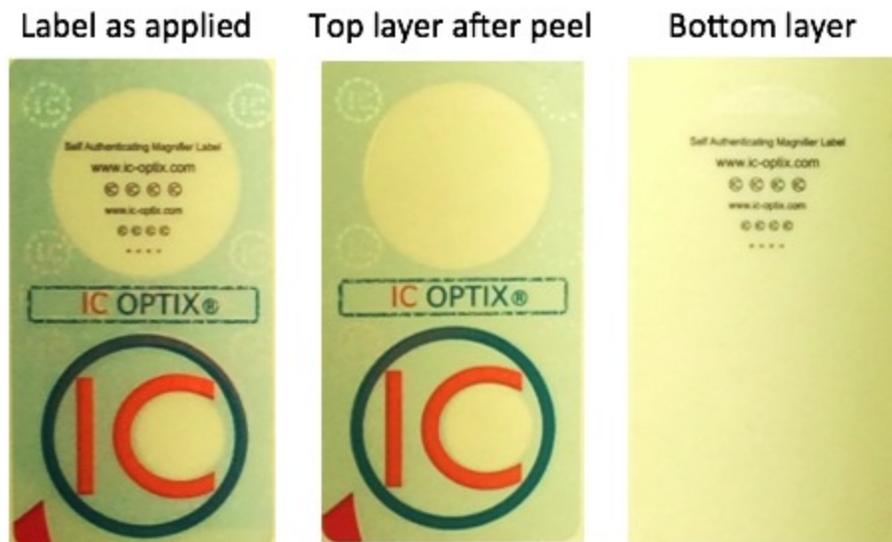
The magnifier film features the same properties of a typical label substrate and can be used on rounded bottles surfaces. “For most applications, a 50-micron thickness would be used, but the lens can be provided on any of the typical film thickness (e.g., 25 μm , 50 μm , 75 μm , etc.),” he explains. “We have found that the 50- μm thickness has the flexibility to wrap on curved surfaces but is stiff

enough to easily hold and use as a magnifier once it is peeled from the surface of the label.”

For cartons, the technology can be provided as a transparent label that can be applied as an over-label, Rittenburg says. “The transparent magnifier label can be placed on cartons or any other packaging that does not normally have a label. The transparent over-label will not obscure any existing text or graphics, and it will provide a peelable magnifier that can be removed and used to read any information on the package, insert, etc.,” he explains. “This approach can also be used if a company does not want to make any changes to its primary label and would prefer to simply over-label it with a transparent magnifier label.”

In addition to integrating thin-film magnifier, IC Optix’s technology can carry “a variety of additional overt and covert microstructures into the magnifier film, which truly make it a security feature as well as a consumer feature,” Rittenburg says.

Shown in the pictures at right is a tamper-evident label with a printed lens layer that was developed together with Securikett, an Austrian label manufacturer that IC Optix has partnered with. The pictures also illustrate an example of a self-authenticating label in which the micro text on the bottom layer can be read using the lens on the top layer. “The lock-and-key feature of a label having microtext as well as the lens to read the microtext provides a new type of self-authenticating label,” he says. “The lens areas on this label are the open circle at the top (provides about 3x magnification) and the smaller clear circle within the C at the bottom part of the label (provides about 6x magnifications). Also seen are some of the other diffractive microstructures in the top left, top right, of the label.”

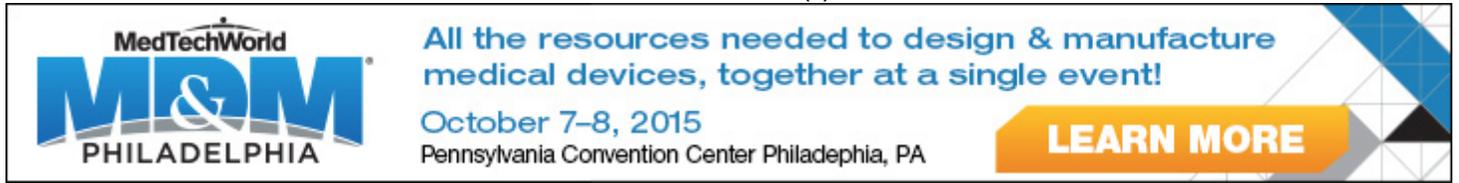


IC Optix offers “the option of either supplying the completely finished label or providing the magnifier film to the brand owner’s label converter for incorporation into finished labels,” he continues. “We believe the option for both avenues is important. My experience has been that most large brand owners have an established supply base of qualified label converters that they may be reluctant to change because it can be a time consuming and tedious process. Also, if the brand owner just wants to add a magnifier layer to their current label, then using their current label supplier may be the least expensive and most expedient way to go. For those applications, we can supply the lenses (with any associated microstructures) in roll form, with or without registration, and customized to be compatible with their label requirements and manufacturing equipment. Think of the rolls of lenses as comparable to rolls of holographic film that get converted into finished labels.”

IC Optix, along with its partner Securikett, can also supply “a completely finished label, customized to a brand owner’s requirements, if that is their preference or if their existing label supplier does not have the capability to produce multilayered labels,” he says.

The company suggests that building a magnifier lens into a product label could increase a brand’s purchase appeal. According to IC Optix’s survey, 59% of respondents were more likely to choose the product offering a magnifier device over a similar product without such a device if all other factors were equivalent. (Survey results can be found in the full report conducted by the company.)

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//ord=Math.random(); //ord=ord*10000000000000000000; document.write(""); if  
(navigator.userAgent.indexOf("Gecko")==-1) { document.write('<VSCR' + 'IPT>'); }  
document.write("");
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