

PHARMACEUTICAL & MEDICAL Packaging NEWS

THE PACKAGING MAGAZINE FOR THE HEALTHCARE INDUSTRY

Marking Already-Blistered Tablets

Imagine filling your blister packages on-line, sealing them, cutting them into market packs, and then noticing that the packaged tablets have no discernable codes on them whatsoever. Sounds like a recall, right?

Not necessarily. This scenario could actually be the future of tablet coding. Tri-Star Technologies (El Segundo, CA), a provider of laser marking systems for medical devices, aviation wire insulation, and other products, has adapted its Nd:YAG UV cold laser systems for marking packaged pharmaceuticals. According to president Alex Kerner, the patented process does not damage the tablet or the package, and it results in a permanent mark.

During the process, UV laser light travels through blister film to change the titanium dioxide present in pharmaceuticals to titanium oxide, which becomes visible to the naked eye. The depth of the letter-quality mark is several microns. "The marks become part of the material," explains Kerner. "Since there is no ablation, there is no surface or thermal damage." To assure potential users of the process's safety for both drug and package, Kerner says the process is used to mark the insulation of aircraft wires, which can afford no insulation degradation.

The reason the UV laser doesn't mark the blister cavity is that most blister films do not contain titanium dioxide and therefore do not absorb the UV energy. Kerner does say that titanium dioxide could be added, or two different plastics could be employed to enable the laser to mark both the package and the tablet, creating a three-dimensional mark or message.

The process may interest drug manufacturers and packagers in need of product traceability, tamper evidence, and authentication. Kerner says that individual tablets can now be marked with bar codes or other codes faster and more easily than with competing methods. In addition to prepackaged products, individual tablets and capsules can be separately marked before packaging. In either case, "The coded tablets can be scanned for identification in hospitals or pharmacies," he says. "They could even be serialized to aid with drug regimen compliance or to match them to specific patients." Trained to look for the codes or other messages, healthcare practitioners, pharmacists, and consumers can then reassure themselves that they are using the prescribed, authentic drug.

Private-label or generic drug manufacturers may also find the system useful when branding the same drug for many

different customers. "These contractors can manufacture and package a drug in high volumes and then code the tablets just-in-time to fill different orders," Kerner says.

By using the system, companies may also reduce their coding inventory costs, adds Kerner, because laser marking doesn't need the consumables that competing methods do.

For years, Tri-Star has found some success in offering medical product manufacturers the M100L-M for marking devices made of plastic, glass, or resin, such as catheters. It hopes now to bring this accepted technology to the pharmaceutical industry. "Our goal is to help drug companies create a secure path from the manufacturer to the end-user," Kerner explains.

—Daphne Allen

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