

Anti-counterfeiting solutions – protection where it is needed

A range of anti-counterfeiting features are increasingly being applied to the packaging of pharmaceutical products as the industry moves to reduce the problem.

The pharmaceutical industry uses special features to provide protection against counterfeiting in the widest possible range of applications.

For example, using a RFID chip for the pallet packaging satisfies both the logistics requirements in the supply chain and allows simple validation of the authenticity of the shipment.

Anti-counterfeiting features are increasingly being applied when it comes to the packaging of the individual item or the retail packaging. Both overt security features, those that are clearly visible to the end-user, and covert features are used. Employing RFID on individual packs is extremely difficult to implement, however, and involves expense and considerable technical effort. So far, other approaches have usually been sought, and adopted.

Overall, a significant increase in the amount of security packaging is apparent on the market. There is hardly a company that is not intensively involved in a working group in dealing with the problem of counterfeiting. The strategies developed within these working groups and subsequently implemented are different: they range from a company's own taskforce for checking products in the marketplace through to evaluation using electronic and optical reader systems.

It is generally accepted, however, that when counterfeit products appear on the market the companies affected must be able to show that they have made serious attempts to avoid counterfeiting and simplify its recognition. From a legal point of view, this is particularly important where the North American market is concerned.

In order to be able to validate the authenticity of individual packs, the secondary packaging, usually a folded box, can have a number of overt, covert and even haptic features. A means of providing anti-tamper-evidence should be integrated into packaging to prevent it being reused.

There are several arguments in favour of adopting at least additional protection for the primary packaging:

The outer packaging is often disposed of immediately, but the blister pack remains with the patient until it has been used up completely.

Blisters cannot be opened non-destructively, so they cannot be reused and are thus tamper-evident.

Parallel imports are possible worldwide so repackaging cannot be ruled out. Here, too, the product stays in the original blisters.

As a further step, the preparation itself can include security features. For example, taggants and markers that make it easier for the drug maker to check the authenticity can be included in a tablet.

The number of anti-counterfeiting features and tamper-evidence solutions available is almost unmanageably large and a multitude of different manufacturers offer the most varied technologies. However, protection against counterfeiting often starts with the blister design; in other words there is a big difference between a blister printed only in black on one side using random printing or one printed in 10 colours on both sides. Use of a more complex print design will deter potential counterfeiters or they will reach the limits of their capabilities for copying the design.

Conversion stages

The various conversion stages in the manufacture of packaging materials can be used to apply security features. With aluminium foil, a customer-specific distinguishing mark can be applied directly during rolling. This is one of the most effective and economical solutions for a broad range of applications. Where smaller quantities are involved, aluminium foils with a neutral wallpaper design are available.

Each packaging stage should be considered separately and has different advantages and disadvantages, but if the worst comes to the worst, having a possible means of identification on the primary packaging would appear to be a particularly secure and reliable approach. The whole of the manufacturing process as well as subsequent processing with its associated requirements have to be taken into account here, however. The blister cover and bottom foils are subjected to significant abrasion by the sealing tool or the deep-drawing operations, so not every feature is suitable for these processes. Even at an early stage of the project, close co-operation between the supplier of the security technology, the machine manufacturer and the packaging material producer is essential.

Further information

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