

# PROTECTING CONSIGNMENTS IN TRANSIT

An international NGO announces a new healthcare programme to increase the availability of malaria drugs in a developing country.

Panpharmco plc agrees to participate in the access programme. It donates 10 million of its 'SeCure' anti-malaria tablets and sells a further 20 million tablets at a preferential price to the region's aid agencies.

### **The threat**

The tablets were shipped out from a European port bound for the developing country. En route the shipment was intercepted by criminals who stole 20% of the tablets and replaced them with counterfeits. These rejoined the original shipment at the port of entry.

The stolen originals were then returned into the European supply network, in packs that contained all the genuine security features.

### **Countermeasures**

Fortunately Panpharmco had been working with Payne. As a result they had implemented the following countermeasures:

### **Anti Copying Technology**

To identify counterfeit products.

The counterfeit products that reached the developing country were successfully identified by officials because their cartons did not match the multi-level set of security features applied to the genuine items. These features included:

- a. A security seal on the lip of the carton with a hologram clearly showing the Panpharmco logo. The counterfeit seals had an inferior version of this hologram.
- b. The Panpharmco logo was printed onto the labels using special security inks which could only be seen through a special viewer that works in infra-red.
- c. The Secure & Protected logo was printed using microprint, a technique similar to that used in bank note production, which is hard to reproduce yet clearly visible using a magnifying glass.

## Tamper Evident Technology

To prevent counterfeit products infiltrating genuine batches.

Officers at the destination port were able to detect the split packs containing the counterfeit items easily because:

- a. The removal of the seal from the original packs had damaged the pack surface, leaving behind a void/tampered message on the pack. This meant that the original seal could not be reused by the criminals, forcing them to substitute an inferior seal.
- b. The colour and action of the Panpharmco hologram was different on the counterfeit seals.
- c. There were no special IR inks on the fake seals.

## Anti Diversion Technology

To aid investigators in identifying, tracing and seizing diverted batches.

Unique codes provided a powerful solution for item level Track & Trace and authentication, a simple check using a mobile phone was able to authenticate the pack instantly.

As they were genuine products, the packs reintroduced to the EU supply chain by the criminals contained all of the genuine security features. However each pack had its own individual identifier, provided by the unique codes.

This meant that investigators could identify which batch the carton had been produced in and identify beyond doubt that the pack had been part of the shipment to the developing country. This gave them the evidence required to seize the consignment.

## Benefits at a glance:

- Potentially harmful counterfeit products reliably intercepted.
- Stolen genuine products recovered, with the potential for prosecutions.
- Deterrent to further, similar criminal action.
- Traceability from factory to patient, protecting the supply chain.

### DISCLAIMER

*For client confidentiality reasons we are unable to provide 'live' case studies, so instead we have prepared hypothetical scenarios to illustrate our capabilities. Panpharmco plc is an imaginary company, but the scenarios are based on our experience of helping the industry protect its patients, products and brands.*



# SECURING PRODUCTION AND PREVENTING COUNTERFEIT PRODUCTS

Panpharmco plc manufactures a widely used global brand of Antibiotic liquid and this has been counterfeited. The product is manufactured by a third party overseas and is supplied to pharmacies and hospitals all over the world in 150ml glass bottles. There is a label on the front and a cap with a built-in tamper evident closure.

### **The threat**

Investigators have discovered that counterfeiters are carefully removing the cap and decanting a portion of the liquid into replica bottles. They are mixing it with other liquids to maintain the correct volume, resealing the original bottles using fake caps and copying the label and cap on the replica bottles. This is doubling the number of bottles in circulation and undermining confidence.

### **Countermeasures**

Panpharmco consulted Payne, who recommended the following solutions:

#### **Anti Copying Technology**

To prevent bottles being misappropriated or faked.

Security features in the form of a Supastrip™ Tear Tape were added to a special shrink sleeve seal that was applied over the lip of the cap. It was virtually impossible to remove the seal without destroying it, thereby preventing reuse. Then, to prevent the production of fake packaging, a range of security features was added to:

#### **1. The Shrink Sleeve**

- a. The shrink sleeve incorporated a highly secure Supastrip® Tear Tape which in itself provided tamper evidence, was difficult to produce and with security technologies added was an extremely robust solution.
- b. Fine Line and Microprint, similar to that used in bank notes, were printed onto the tear tape. These were hard to reproduce and also clearly visible to investigators using a magnifying glass.
- c. A high security colour shift ink was used, the colour brightness and replay of the shift was hard to replicate, making it easy for investigators to identify fakes.
- d. The Panpharmco logo was printed onto both the tear tape and the shrink sleeve using UV inks which only show up under specific light sources.

## 2. The Label

- a. The label had a patch printed on it with a high security colour shift ink. The ink itself provided a layered security feature; a colour shift visible with the naked eye provided visual authentication for the general public while a special validator with two filters was needed to see a secondary feature, through one filter the colour appeared intense and bright while through the other, it disappeared or changed colour.
- b. A patch was printed with a proprietary taggant that was exclusive to Panpharmco. This machine readable feature showed up using a specific reader, distribution of which was closely controlled.

## Tamper Evident Technology

To prevent criminals opening and refilling bottles. The shrink sleeve made it almost impossible for the counterfeiter to open bottles and reseal them without detection.

The cutting tool used for the label was designed so that security slits were made around the edge of the label. This meant that the label was destroyed if anyone attempted to remove it from the bottle for duplication or to apply elsewhere.

## Benefits at-a-glance

- Inferior and potentially harmful imitation products removed from the market.
- Genuine labels and packaging protected from misappropriation.
- Robust counterfeiting deterrents built in to labelling and packaging.
- Brand reputation protected.

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## PREVENTING UNOFFICIAL 'THIRD SHIFT' PRODUCTION

Panpharmco uses contract manufacturers to produce an Antibiotic in tablet form within various regions of the world. Tablets are packed in small pots with a tamper resistant lid and tamper evident seal.

### **The threat**

The company has uncovered evidence that certain individuals within the contract manufacturer are running an unofficial 'third shift' where uncontrolled products were being manufactured for the domestic market.

With no quality control, products were inconsistent; some contained no active ingredients at all while others contained dangerously high levels, making them potentially fatal for patients. The criminals were then infiltrating the legitimate supply chain using a mixture of genuine and fake packaging – a practice commonly known as 'salting' which makes it much more difficult to detect fakes in the supply chain.

### **Countermeasures**

In partnership with Payne, Panpharmco identified the following solutions:

#### **Anti 'Third Shift' Technology**

To prevent elements in the third party manufacturer using genuine packaging for their own criminal use.

Panpharmco switched manufacture to a PS9000:2008 accredited company that operated to best practice in packaging production. Every label supplied to production was individually numbered, with number ranges allocated to specific production runs.

As a result no additional genuine labels were available for misuse and with the new security labels, producing a workable imitation became extremely difficult.

## 1. The label

With the supply of genuine labels cut off, it was necessary to deter counterfeiting of labels. This was achieved by:

- a. Printing a patch on the label with a polarising colour shift ink. The ink itself had an extremely limited supply chain making it difficult for criminals to obtain the genuine product and it would be difficult for them to convincingly duplicate the colour brightness and replay of the shift with a copy, making it easy for officials to identify fakes.
- b. Adding a proprietary taggant, exclusive to Panpharmco. This machine readable feature showed up using a specific reader, distribution of which was controlled.

## 2. The seal

To exert further pressure on counterfeiters, a secure seal was added to legitimate products, featuring:

- a. UV fibres embedded in the seal that could be easily identified with a simple light source.
- b. A printed guilloche pattern which is difficult to copy.
- c. Panpharmco's secure, proprietary taggant.
- d. A Panpharmco hologram.

## Benefits at-a-glance

- Ineffective and potentially hazardous products removed from the marketplace.
- Packaging secured, tracked and fully auditable.
- Sophisticated countermeasures that made counterfeiting a difficult and costly process.
- Robust, reliable protection from tampering, copying and brand infringement.

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