

Keeping products within recommended expiry dates

Pharmaceutical products have an expiry date and may state that once opened or mixed the contents should be used within a specific period of time. Manufacturers research the maximum shelf life of their products but it can be a significant task ensuring that these dates are monitored and adhered to.

The expiry date is the point in time when a pharmaceutical product is no longer within an acceptable condition to be considered effective and the medication or treatment reaches the end of its shelf life. Depending on the product, the expiry date may be set as a fixed time:

- Following manufacture
- After dispensing
- After opening of the container

The shelf life of products is determined by either the breakdown of the active drug or by risk of contamination. Not all drugs deteriorate at the same rate. Manufacturers invest time and resources into testing their products and calculating the expiry and use within dates to ensure that the product is safe to use and has optimum efficacy.

Possible effects of using expired stock:

- The active ingredients could become chemically unstable
- The effectiveness of the product may change

- The break down products of the drug or treatment may be toxic and harmful to the patient
- There may be increased risk of contamination

Minimising the risks of using expired stock can be difficult and time consuming. Manufacturers print dates on the packaging of pharmaceutical products but, for the end-user, this can be confusing.

Some products may require reconstitution, dilution or decanting from bulk containers into smaller ones and at this point require re-labelling. Handwritten or printed labels can be smudged, torn or simply illegible.

Stock control can be an arduous but necessary task that takes time and resources, and yet there is the requirement to reduce waste and costs whilst minimising the risks of using out-of-date product or not having the correct stock available when it is required.

For the end user it is not always easy to decide whether a product is safe to use or not.





Find out how UWI can help you

- ✓ reduce risk
- ✓ reduce cost
- ✓ improve stock control

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Real-time solution

Working alongside your current processes the UWI Label offers an innovative and accurate approach to monitoring the time that a product is safe to use or that a test meets the required criteria. Simply applied at the time of packaging or use, the label clearly gives a universally recognised indicator of the time of expiry for the product.

User-friendly concept

The UWI Label incorporates an embedded, elapsed-time indicator strip which is automatically activated when the product is opened; progressively changing from green to red according to a pre-set time period. Red alerts the user or carer that the product may no longer be safe.

Alternatively the label can be activated when it is peeled from a sheet and applied to a product as it is reconstituted, diluted, decanted from a bulk storage container or mixed.

Unique technology

Designed using microfluidic technology, the patented smart label comprises three parts; the fluid, the microfluidic channel and the flexible material substrate. Many years of rigorous scientific and technical development is behind its successful performance.

Tailored timescale

Timeframes are pre-set at the point of manufacture using microfluidic technology. This can be from minutes to hours, days, weeks and months. The label can also be set to longer periods, subject to further UWI Technology research and development and validation.

Broad application

Made from flexible, paper-like, composite materials, the UWI Label is suitable for application on a wide variety and size of jars, bottles, packs, devices, surfaces, containers and tubes. It is consistently reliable across refrigerated and ambient products.

Versatile design

The size of the UWI label can be adjusted according to its intended use and artwork developed to align with product or facility branding.



Founded in 2009 by CEO and inventor of the UWI Label, Pete Higgins, UWI Technology has since won a raft of awards in recognition of its technical and commercial developments from organisations including: PWC Scotland, Barclays, NESTA, SMART Scotland and Scottish Enterprise.

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Benefits

The UWI Label gives a clear indication of when a product is still safe and suitable to use which means:

- Reduced risk of infection
- Reduced risk of ineffective treatment caused by diminished efficacy of drugs and drug toxicity
- Reduced waste as there will be less likelihood of doubt about using a product or discarding it
- Reduced costs because of the reduction in waste, repeat treatment and length of patient stays because of ineffective treatment or additional treatment because of contamination of product
- Improved stock control
- Improved quality and audit procedures
- Support for the risk management strategy for infection control
- Improved patient/client comfort
- Improved confidence in the product for the healthcare professionals and patients