

# PolyTaksys

Open  
Monitor

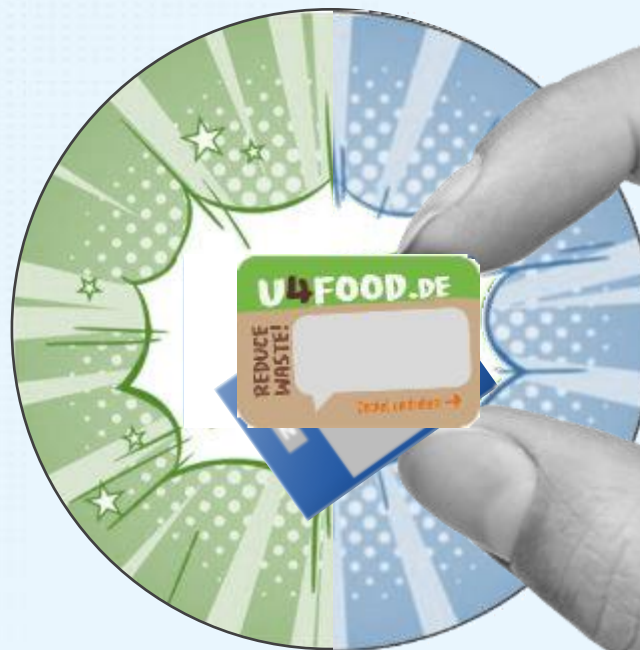
## SMART LABEL TECHNOLOGY

## OPEN MONITOR

- short presentation -

Explanation and usage options of the technology

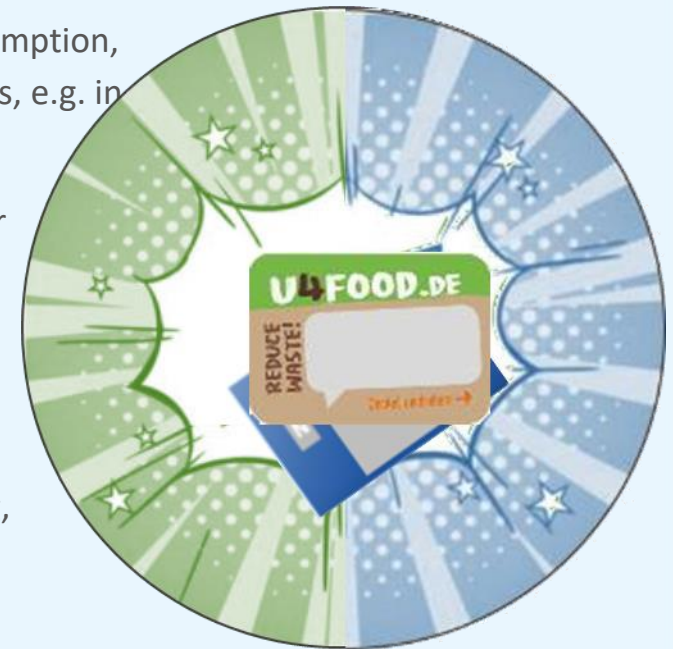
welcome  
to  
transparency





# FEEL and SEE - OPEN MONITOR.

- **We sell** controlled freshness for chilled food in everyday consumption, as well as product safety in uncertain environmental conditions, e.g. in logistics, in the pharmaceutical sector or in security printing.
- **We support** you in maintaining the best possible manufacturer quality of the product, from production through the entire supply chain to the individual handling of the product by the user.
- **We are developing** intelligent labels with sensory properties in the area of printed electronics that, as part of the packaging, create the communicative interface directly with the user.
- **"The label that can speak and feel!"**





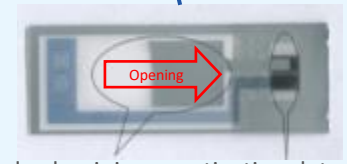
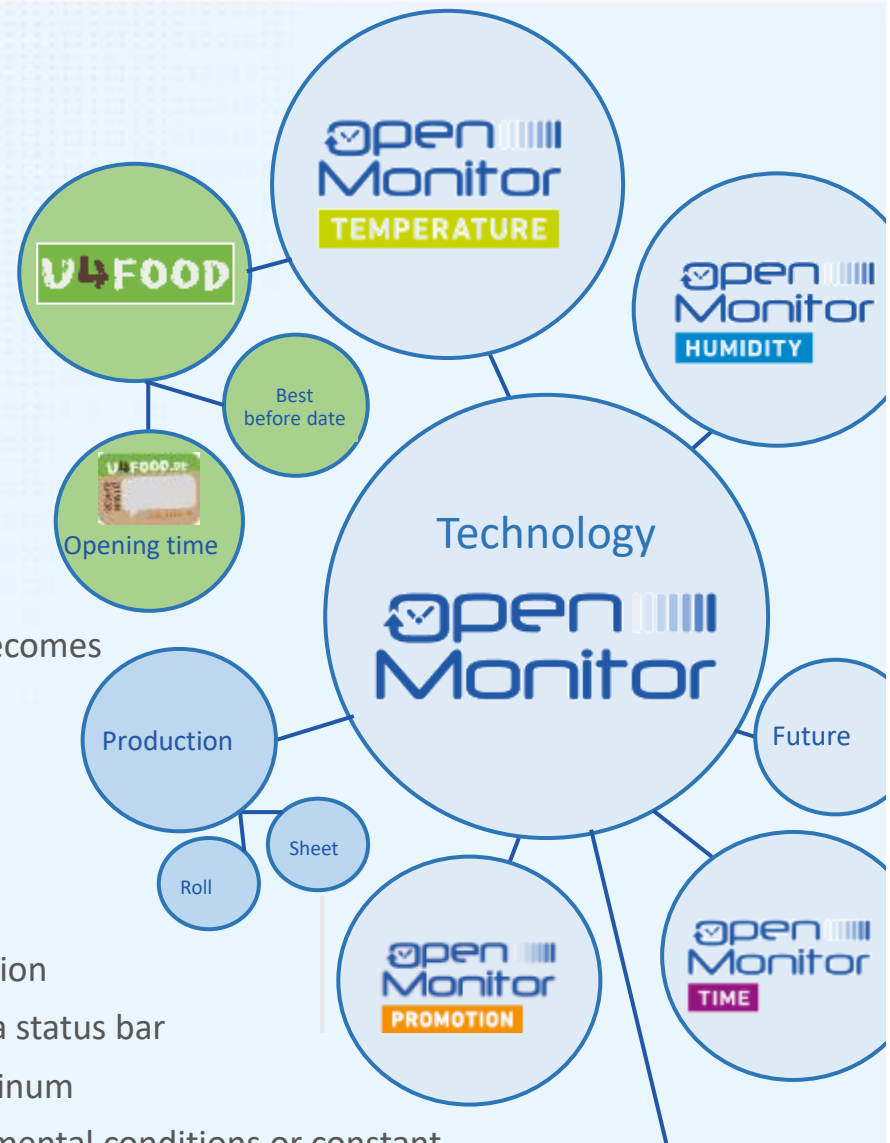
# TECHNOLOGY- OPEN MONITOR.

## The electronic nanofilm processor

- Intelligent labels of printed electronics
- Self-writing effect = central function
- Principle of lateral oxidation = aluminum layer becomes transparent
- Self-contained electrochemical processor
- Patented in key global markets
- Application patents throughout Europe

## Performance & Use

- Various sensory skills, individually or in combination
- Sharp phase boundary when opening, serves as a status bar
- Exposing individual information behind the aluminum
- Exposure time defined as dependent on environmental conditions or constant
- Deposited or as an integral part of the packaging
- Use: individual packaging, print products, all carrier materials
- Areas: food, beverages, pharmaceuticals, chemicals, security, print media



nanoscale aluminium activation detection

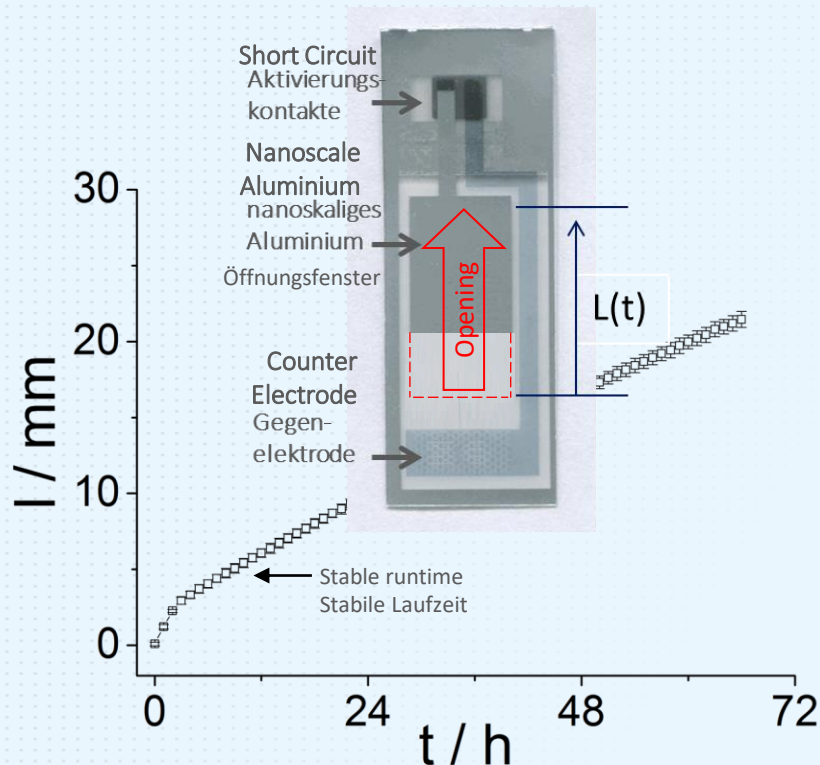


# TECHNOLOGY + SENSORS OPEN MONITOR.

## The electronic nanofilm processor

## Sensoric functions

variable linking options



+

„Temperature“

← Works with temperature in correlation with the time factor

+

„Humidity“

← Works with humidity thresholds and in correlation with the time factor

+

„Time“

← Works as an encapsulated system analogous to a clock, independent of external influences

+

„Promotion“

← Uses environmental influences for your own dynamic





# INITIATIVE FOR FOOD

- with different cooling requirements -



## OPENING TIME SUPERVISION

product for market entry

### Function:

- Start of the time monitoring in connection with the ambient temperature when the product is opened.
- Running time corresponds to the manufacturer's consumption recommendation.
- DIN Spec applied for.

### Marketing:

- Product/Consumer Interaction
- Trains timely EATING.
- Food saving & packaging waste avoidance
- product differentiation



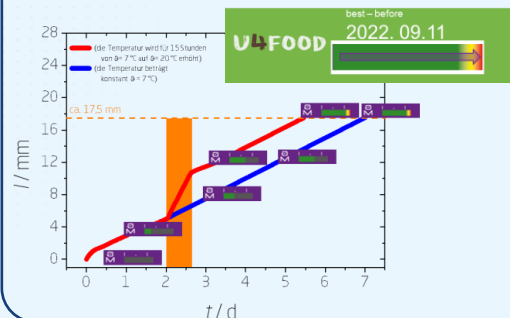
## DYNAMIC BEST BEFORE DATE (BBD)

### Function:

- Temperature - time - integral for cold chain monitoring.
- Activation in the filling process.
- Automated function to shorten or lengthen the printed BBD.
- DIN workshop: dynamic best-before date approved in expert panels.

### Marketing:

- Reflection of environmental influences on product quality.
- Control of the best possible manufacturer quality through a variability of the BBD display.
- Timely consumption recommendation



## AUTOMATIC DISCOUNT

### Function:

- Label integrated in packaging.
- For sushi, fruit, etc.
- Runs from the time of packaging.
- Discounts automatically after a set time.
- Option: With EAN code adjustment

### Marketing:

- Use in the ultra fresh range.
- No staff deployment
- No relabeling.
- Process optimization in-store logistics.
- Fresh security.



## Temperature - time integral for cold chain monitoring

### Function:

- Activation in the production process.
- Automated function to shorten or extend specified shelf lives based on environmental influences.

### Marketing:

- Reflection of environmental influences on product quality.
- Control of the best possible manufacturer quality through a variability of the shelf life indicator.
- Timely use recommendation.
- Closing gaps where digital tracking cannot work.
- Logistics, courier trips, packaging, products themselves.



## Threshold & dose indicator for moisture sensitive products

### Function:

- Activation when defined thresholds are exceeded. For example, measuring whether wood or cement is too damp.
- Dosimeter measures how long the exceeded dose has acted on a product.

### Marketing:

- Closing gaps where digital tracking cannot work.
- Logistics, courier trips, packaging, products themselves, staging areas in production processes.
- Automatic sorting out of goods in combination with RFID



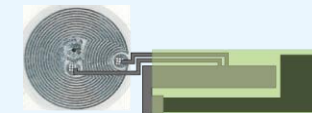
## RFID coupled with Open Monitor

### Function:

- Direct combination with RFID chips
- Options of activation & deactivation of digitally readable information using the OM nanofilm processor.
- Upon request, activation e.g. after exceeding temperature or humidity X.
- Switching to different contents of a chip under environmental influences.

### Marketing:

- Readability can be made available.
- Readability can be provided on a temporary basis.



## QR code combined with Open Monitor

### Function:

- Completely concealed with opening via the OM viewing window.
- Partially concealed via the OM viewing window.
- Timed readability of the QR code
- Optical activation & deactivation via the Open Monitor.

### Marketing:

- Actively control the availability of digital bridges in small time windows.
- Link the analogue play instinct with the digital world.



## Time-delayed release of information - e.g. promotion

### Function:

- Multifunction contact: "4in1" content.
- Approval of product images for new products

### Marketing:

- Use in advertising.
- Attachment to advertising media.
- target group guidance function
- Sweepstakes
- Gambling



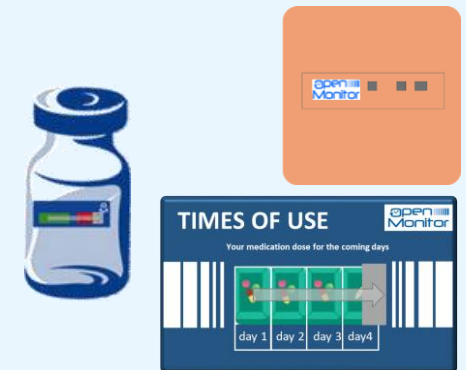
## PHARMA - usage and logistics monitoring of sensitive products

### Function:

- Security in product qualities.
- use of
- Time indicators
- Time-Temperature Indicators
- Humidity threshold indicator

### Marketing:

- retention times
- Shipping times considering temperatures
- usage habits
- changing time of a patch
- Transport of human samples
- Patch change after e.g. 3 days



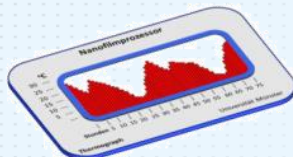
## THERMOGRAPH - Temperature development from the laboratory status

### Function:

- Series of cold chain monitors that monitor individual sensory functions for 1 day or 1 hour, e.g. 48 days in total.
- Time-Temperature-Indicator functions over longer periods of time (week, month, etc.).
- Monitoring functions directly on the product packaging.
- Identification of overload situations according to the polluter pays principle.

### Marketing:

- Closes security gaps in digital temperature tracking of large-scale storage situations.
- Identifying the cause of the cold chain disruption.



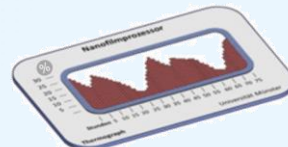
## THERMOGRAPH – Humidity development from the laboratory status

### Function:

- Stringing of threshold monitors.
- Humidity individual functions for exceeding the threshold value with indication of the exposure dose over longer periods of time (week, month, etc.).
- Monitoring functions directly on the product packaging.
- Identification of overload situations according to the polluter pays principle.

### Marketing:

- Closes the security gap in general, digital humidity tracking of large-scale storage situations.



## Technological development out of the laboratory status

### Function:

Multifunctional services from the areas of time, temperature & humidity.

- Oxidize away holograms
- Cascading (open several OMs in a row)
- Segment exposure
- Secure bank codes
- Protection against counterfeiting & many applications in security printing

### Marketing:

- Combination labels that have to be derived from the laboratory status.







# STARTING INTO A NEW ERA WITH OPEN MONITOR.

## Contact

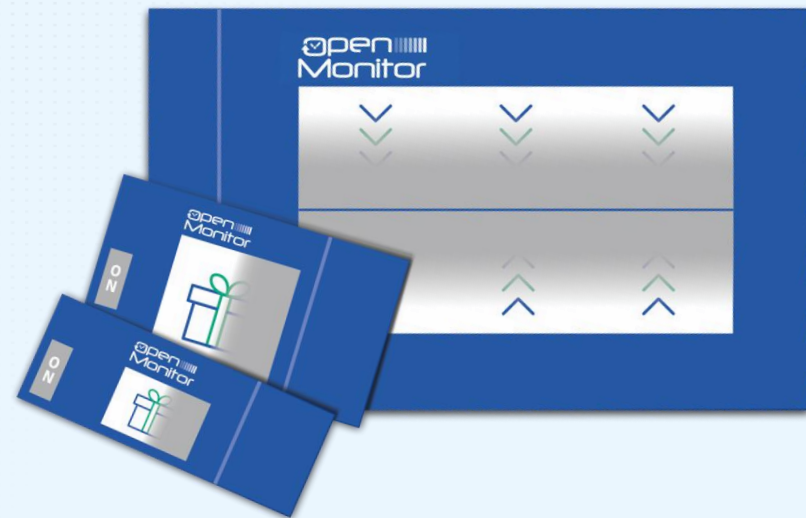
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