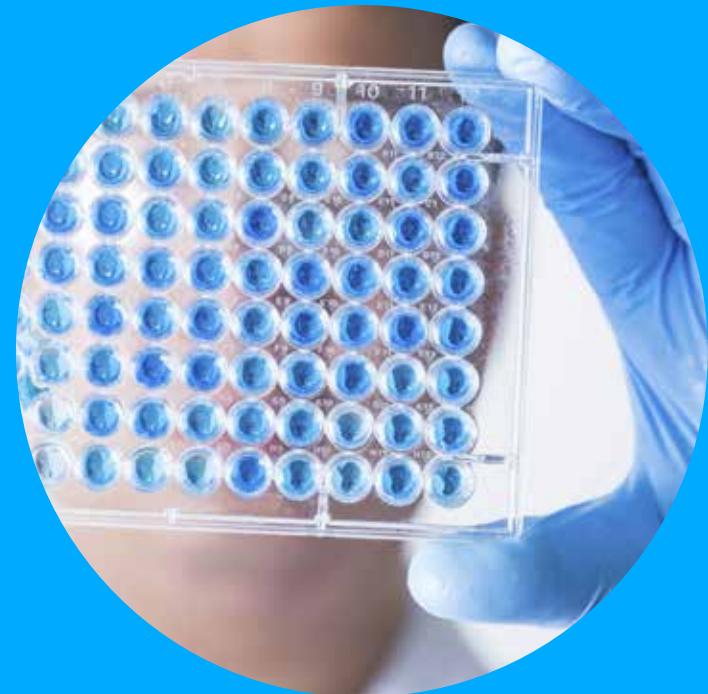


# Substrates



PROVIDING CONSCIOUS IMMUNOASSAY SOLUTIONS

**kementec**

# Substrates

Kementec has developed and manufactured liquid TMB products over the past 30 years. We offer a wide range of different substrate formulations for ELISA, membrane and electrochemical assays.

Offering a shelf life up to 4 years of the ready-to-use substrates enables assay manufacturers to source this critical raw material following an economically viable plan.

Products can be developed and produced as customized solutions adapted to your specific application needs. Contact us for further details.

## Soluble HRP Substrates

⌚ 4 years

**TMB ONE:** "Gold Standard"  
**TMB PLUS2®:** High robustness  
**TMB X-tra:** High sensitivity  
**TMB EASE:** 1:1 replacement of carcinogenic OPD  
**TMB X-tnd®:** Non-precipitating at high OD, wash solution resistant

## Soluble AP Substrates

⌚ 2 & 3 years

**pNPP:** Highest sensitivity  
**pNPP ONE:** High temperature robustness

## Precipitating Substrates

⌚ 4 years

**BCIP/NBT:** Intense stable blue/purple precipitates  
**TMB Blotting:** Stable blue color  
**TMB-D Blotting:** Superior background characteristics

## Chemiluminescent Substrates

⌚ 3 years

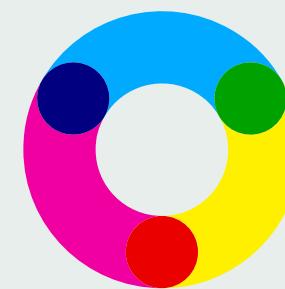
**KemiLumin Sirius:** Higher assay sensitivity  
**KemiLumin Vega:** Reduced assay intensity

⌚ Shelf life

ENVIRONMENTAL  
**ECO-TEK®**  
CONSIDERATION

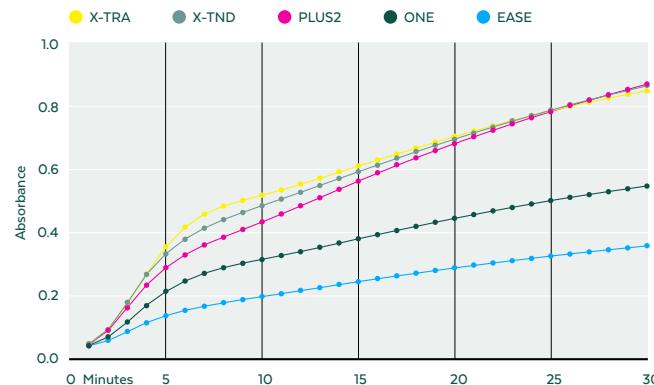
Our immunoassay solutions are developed in order to create a safer work environment while helping our customers fulfill significant regulatory requirements.

We call it ECO-TEK®



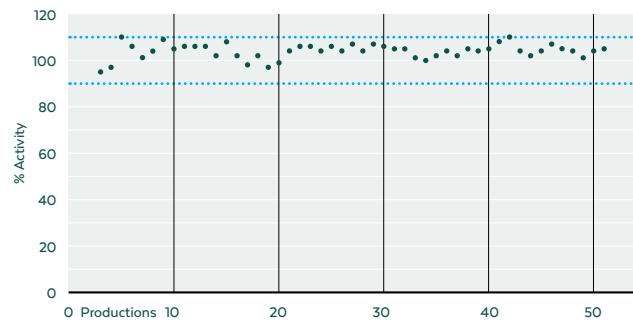
## Prestained Solutions

Products are available colorcoded, prestained pink for traceable pipetting. The pink indicator is a benefit in manual and automatic dispensing. The color does not interfere with the endpoint or kinetics of the assay.



## TMB Kinetics

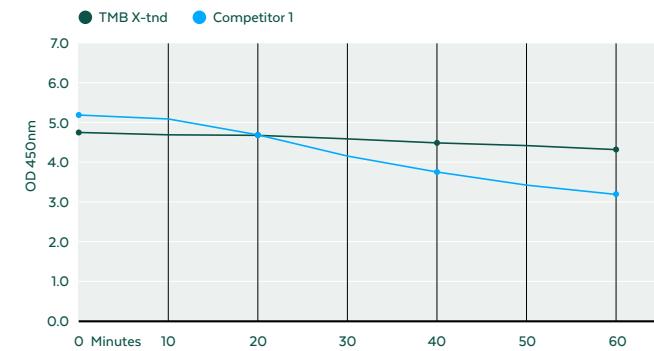
Sensitivity levels and speed of color development of the different TMB formulations shown at incubation time 1-30 minutes.



## Lot-to-lot variation

In order to achieve high quality levels, rigorous QC standards ensure negligible lot-to-lot variations.

Lot-to-lot consistency, displayed in the example, shows the last 7 years productions of TMB PLUS2, which lie within a 20% interval.



## Stop Solution Benefits

As we focus on environmentally safe products, Kementec substrates require low stop solution concentrations.

The superior stop stability maintains the final OD level, as illustrated, where Kementec's TMB X-tnd is compared to 1 competitor. The stop stability up to 60 minutes drops to no more than 5% in the high OD area.

## The use of our TMBs at room temperature

Over the years, we have consistently observed that our TMB substrates have shown excellent stability and performance when stored at room temperature, remaining effective without refrigeration. This stability improves storage flexibility and eliminates the need for cold chain logistics, allowing easier handling and operational ease.



# Solutions for Chemiluminescence

KemiLumin Sirius and KemiLumin Vega are sensitive substrates which produce an intensive stable light, while offering a highly stable working solution, low signal to noise ratio, and low background characteristics. Both products are supplied as two components, A and B, which are to be mixed 1:1.

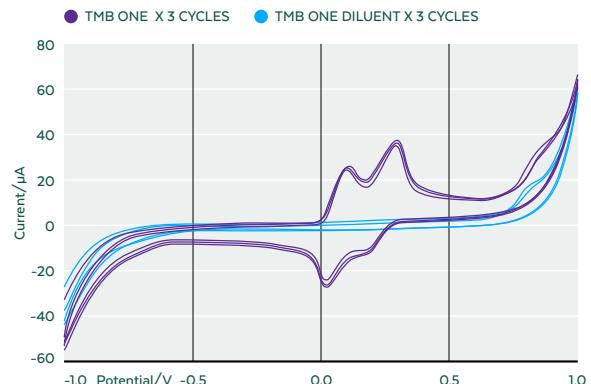
Both substrates work well in Immunoassays like: ELISA, Western Blot, Spot Arrays, Endpoint Assays, and Kinetic Immunoassays.



# Solutions for Electrochemistry

TMB (3,3',5,5'-Tetramethylbenzidine), the most commonly used chromogen for HRP (Horseradish Peroxidase), has long been known for its chromogenic abilities in immunoassays. The same redox reactions that induce the color change in TMB can be measured electrochemically. This feature allows for TMB detection systems to be used in sensor based electrochemical assays.

Experience shows that our TMBs perform very well in several electrochemical settings and the various TMBs offer unique characteristics.



**TMB ONE:** pH: 3.80 - 4.20

**TMB PLUS2®:** pH: 3.50 - 3.90

**TMB X-tnd®:** pH: 3.70 - 4.10

**TMB X-tra:** pH: 3.50 - 3.90

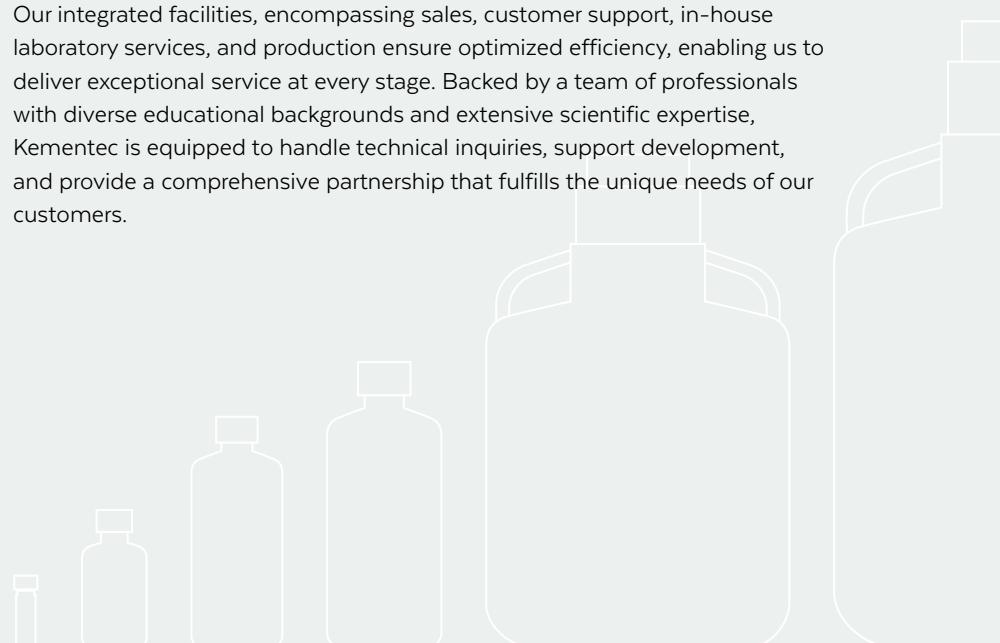
# Customized and Bulk Solutions

We specialize in delivering unique solutions tailored to our customers' specific needs and offer customized and bulk solutions that include:

- Custom filling, bottling and packaging
- Private labeling
- Personalized products, development and product formulations

ISO 9001:2015 and ISO 14001:2015 certifications drive us to create the best immunoassay solutions possible. Whether it is product development or filling bottles on your behalf, we have the capabilities to meet all your needs.

Our integrated facilities, encompassing sales, customer support, in-house laboratory services, and production ensure optimized efficiency, enabling us to deliver exceptional service at every stage. Backed by a team of professionals with diverse educational backgrounds and extensive scientific expertise, Kementec is equipped to handle technical inquiries, support development, and provide a comprehensive partnership that fulfills the unique needs of our customers.



## Solutions for ELISA

When developing and designing a new immunoassay, or optimizing an existing assay, the importance of being able to optimize as many parameters as possible becomes important. In addition to substrates, we offer a wide range of products to optimize the various layers in the assay.

	INCREASE SENSITIVITY	MINIMIZE BACKGROUND	EXTEND SHELF LIFE
Detection with Substrates	TMB X-tra/TMB X-tnd pNPP	pNPP ONE	TMB ONE/TMB PLUS2 TMB X-tra/TMB X-tnd pNPP ONE

## Solutions for Membrane Assays

Several products have been developed as ready-to-use components for use in membrane-based assays. Apart from substrates, we offer a versatile selection of components for optimization in the different layers in the assay.

	INCREASE SENSITIVITY	MINIMIZE BACKGROUND	EXTEND SHELF LIFE
Detection with Substrates	TMB Blotting BCIP	TMB-D Blotting	TMB-D Blotting BCIP

# Profile

Kementec is a well-established, innovative, and service oriented company with more than 35 years of experience as a manufacturer and supplier of components to the industry and to researchers worldwide.

Being a market leader in developing solutions for immunoassays, our continuous goal is to deliver sustainable products without compromising on quality, sensitivity and accuracy.

Kementec values long lasting business relationships and the success of our customers. We consider ourselves more as a trusted partner than as a general supplier. A part of this vision is providing high quality colorimetric substrates and color-coded reagents, described as:

## **Colors of Success!**

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