For life science research only.
Not for use in diagnostic procedures.

# BM Blue POD Substrate, soluble
## 3,3’-5,5’-Tetramethylbenzidine (TMB)

**Version: 18**
Content Version: July 2021

Solution, ready-to-use

**Cat. No. 11 484 281 001** 100 ml

**Store the product at +2 to +8°C.**

# 1. General Information

## 1.1. Contents

| Vial / bottle | Label | Function / description | Content |
|---|---|---|---|
| 1 | BM Blue POD substrate, soluble | ▪ Clear, slightly yellow solution.<br>▪ Sufficient for 500 wells in microplates. | 1 bottle,<br>100 ml |

## 1.2. Storage and Stability

### Storage Conditions (Product)

When stored at +2 to +8°C, the product is stable through the expiry date printed on the label.

| Vial / bottle | Label | Storage |
|---|---|---|
| 1 | BM Blue POD substrate, soluble | Store at +2 to +8°C.<br>⚠ ***Do not store at +15 to +25°C.*** |

## 1.3. Additional Equipment and Reagent required

**For measurement of the color development**

- 1 M $H_2SO_4$

## 1.4. Application

BM blue POD Substrate serves as a chromogenic substrate for the peroxidase-mediated color development in enzyme immunoassays.

- It is especially suitable for ELISAs (Enzyme Linked Immunosorbent Assays) that require high sensitivity.
- The reagent shows higher sensitivity than o-phenylendiamine (oPD) or ABTS solution, and is classified as non-toxic.

# 2. How to Use this Product

## 2.1. Before you Begin

### General Considerations

#### Precautions

- The reagent is highly sensitive to peroxidase activity. Avoid nonspecific contamination during application.
- Do not pipette directly from the bottle. The required amount of reagent should be filled in a clean bottle.

### Safety Information

3,3′,5,5′-Tetramethylbenzidine is not carcinogenic in the AMES test.

### Working Solution

Soluble in water.

## 2.2. Protocols

### Measurement of color development

1. The color development is generally completed after 20 minutes at +15 to +25°C.

2. When observing the color development within this time frame, take measurements at 370 nm against a reference wavelength of 492 nm.
   *The color of the reaction product is blue.*

3. For optimal sensitivity, stop the reaction after approximately 10 to 30 minutes using 1 M $H_2SO_4$.
   *The color will change to yellow.*

4. Measure the absorbance at 450 nm against a reference wavelength of 690 nm.

## 2.3. Parameters

### Chemical Formula

$C_{16}H_{20}N_2$

### Molecular Weight

240.35 g/mol

### Working Concentration

50 to 250 µl/well; must be optimized.

# 3. Supplementary Information

## 3.1. Conventions

To make information consistent and easier to read, the following text conventions and symbols are used in this document to highlight important information:

| Text convention and symbols | |
|---|---|
| *Information Note: Additional information about the current topic or procedure.* | |
| **Important Note: Information critical to the success of the current procedure or use of the product.** | |
| ① ② ③ etc. | Stages in a process that usually occur in the order listed. |
| ❶ ❷ ❸ etc. | Steps in a procedure that must be performed in the order listed. |
| * (Asterisk) | The Asterisk denotes a product available from Roche Diagnostics. |

## 3.2. Changes to previous version

Layout changes.
Editorial changes.

## 3.3. Trademarks

ABTS is a trademark of Roche.
All other product names and trademarks are the property of their respective owners.

## 3.4. License Disclaimer

For patent license limitations for individual products please refer to:
**List of biochemical reagent products**.

## 3.5. Regulatory Disclaimer

For life science research only. Not for use in diagnostic procedures.

## 3.6. Safety Data Sheet

Please follow the instructions in the Safety Data Sheet (SDS).

## 3.7. Contact and Support

To ask questions, solve problems, suggest enhancements or report new applications, please visit our **Online Technical Support Site**.

To call, write, fax, or email us, visit **sigma-aldrich.com**, and select your home country. Country-specific contact information will be displayed.

0721.11494457001 ®

Roche Diagnostics GmbH
Sandhofer Strasse 116
68305 Mannheim
Germany