

1. Product identifier

SeramunBlau®spot
 SeramunBlau®spot dark

S-709-#-TMB
 S-710-#-TMB

2. Effective Components

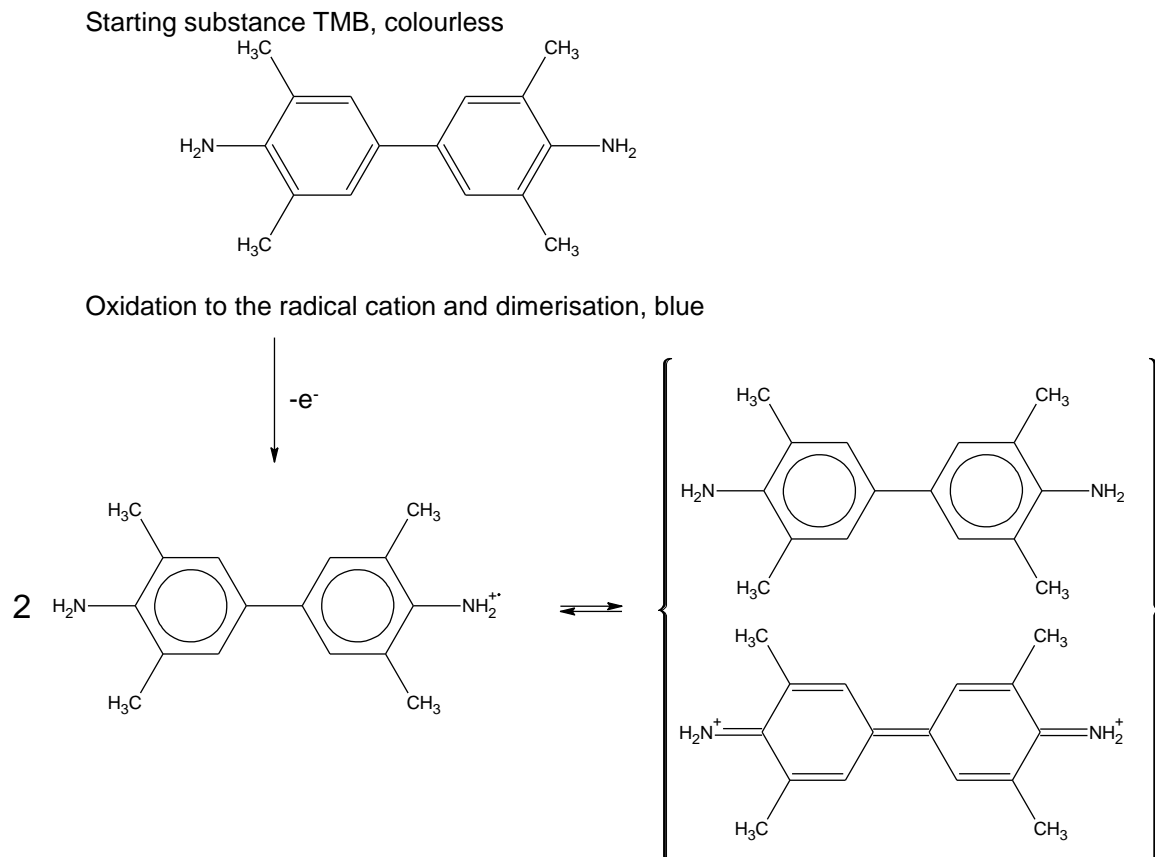
A citrate buffer system (pH 4.5 - 5.0) contains the following effective components:

- Hydrogen peroxide and
- 3,3',5,5'-Tetramethylbenzidine (TMB) and
- precipitating reagent

The concentrations are below hazardous levels (see safety data sheet).

3. Principle of Function

Peroxidase catalyses the decomposition of hydrogen peroxide, taking electrons from TMB (by oxidation). Oxidation of TMB forms a radical cation that stabilizes by dimerisation and shows the typical blue colour.



This blue cation is stabilized by forming an insoluble complex with the precipitating reagent. So at positions with horseradish peroxidase activity a blue precipitate will appear. This precipitate is very fine so that even the smallest dots can be coloured regularly.

The difference between SeramunBlau®spot and SeramunBlau®spot dark is the precipitating agent.

4. Instruction for Storage, Transport and Bottling

SeramunBlau®spot and SeramunBlau®spot dark shall be stored at 2-8°C protected from light. Under these conditions a shelf life of 24 months for SeramunBlau®spot and 36 months for SeramunBlau®spot dark is given for the unopened bottle.

The solution will still work beyond the expiry date, but a lower sensitivity has to be taken into account and a precipitate may occur.

Contaminated or leaked out substrate solution from damaged bottles should not be used and has to be destroyed.

The solution can be transported at room temperature, but temperatures exceeding 30 °C have to be avoided. Shipping should be completed within one week.

For bottling consider the following instructions:

- Work in a dust free and darkened room.
- Pay attention that the solution has no contact with metal parts (leading to catalysis) of your instruments. Closed systems of silicon tubes are favoured.
- Clean all instruments and vessels very carefully.
- Never touch parts of the instruments that are in contact with the solution with the naked hand. Wear powder free gloves.
- Close the bottles immediately to minimize the influence of light and dust.
- Use bottles that are not permeable to light, made from HDPE or PP.

5. General Instructions for the Use on Microchips

Only qualified laboratory staff, familiar with the basics of immunological methods, are allowed to use this solution.

Attention: Substrate solutions are very sensitive against impurities. That's why never dip in with pipette tips into the storage bottle. Unused solution never return into the bottle! Do not interchange cups of the bottles!

The substrate solutions SeramunBlau®spot and SeramunBlau®spot dark are intended for the use in test systems on glass or plastic surfaces (polycarbonate or polystyrene) with instrumental measurement. Depending on the system it is sufficient to wash the microarrays after incubation with conjugate and then cover them with substrate solution afterwards. The arrays may be developed under rocking movement until a distinct colour appears (about 5 to 10 minutes). The measurement can be performed either with the wet array or after washing with distilled water and drying. Dry Microchips may be stored for documentary purposes. (Note: some glues destroy the coloured precipitate)

If there are any special problems, e.g. the use in different detection systems, we endeavour to formulate an individual substrate solution in collaboration with our customers.

Please note our products SeramunGrün®chip and SeramunGrün®spot, which develops green precipitates in test systems with horseradish peroxidase and the colour can easily be measured with red laser light.

For the use with alkaline phosphatase we offer the BCIP/NBT substrate solution SeramunPurple®prec.

6. Literature

R.J.Weinberg, S.L.Van Eyck: A Tetramethylbenzidine/Tungstate Reaction for Horseradish Peroxidase Histochemistry; The Journal of Histochemistry and Cytochemistry, Vol 39, No. 8, pp. 1143-1148, 1991

7. Symbols used



Consult instruction for use



Temperature limitation



Do not reuse



Use by



Catalogue number



Batch code



Manufacturer



Keep away from sunlight