



6352 CORTE DEL ABETO, STE B
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PMS

Catalog Number: PMS
Quantity: 100 microliters
Format: PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4), no preservative.

Background:

PMS is an electron acceptor and carrier in enzyme systems. The oxidized form is yellow and the reduced form is colorless. Since the reduced PMS is easily oxidized by oxygen, it is used in assays as an electron carrier between enzymes and oxygen, cytochrome c, indophenols, or tetrazolium salts. The reduced PMS is used as an electron donor to reduce cytochrome c or in photosynthetic experiments. PMS is reduced by flavoproteins such as succinic dehydrogenase. PMS is reduced non-enzymatically by NADH and NADPH. PMS is also reduced by dithionite, sodium borohydride, ascorbic acid, reduced ubiquinones, and reduced vitamin K. PMS reacts with sulfhydryl groups including those of enzymes.¹ Usage of PMS for detection of specific dehydrogenases has been reported.^{2,3}

Specificity and Preparation:

molecular formula: $C_{14}H_{14}N_2O_4S$

molecular weight: 306.3 daltons

Usage and Storage:

The material should be stored at $-20^{\circ}C$. Avoid repeated freezing and thawing. Solutions in water are stable frozen and protected from light for several months. Decomposition of solutions (with formation of pyocyanine and other products) may take hours when they are exposed to diffuse light, but only 5-10 minutes when exposed to sunlight.

References:

1. Data for Biochemical Research, 3rd ed., Dawson, R. M. C., *et al.*, Oxford University Press (New York, NY: 1986), pp. 356-357.
2. Nachlas, *et al.*, *J Biol Chem*, 235, 499-503 (1960).
3. Babson, A. L., and Babson, S. R., *Clin Chem*, 19(7), 766-769 (1973).

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