

Discovery Life Sciences
6 Henshaw Street
Woburn, MA 01801
Tel: (866) 838-2798
info@dls.com
<https://www.dls.com/>

Gentest™ NADPH Regenerating System Solution A

Catalog Number..... 451220 **Storage Conditions..** STORE AT -20°C
Lot Number.....2409040 **Date Released**2024 September

Package Size5.0 mL

NADP⁺ Reductase Activity ...0.21 µmol/min*mL

Solution A Components26 mM NADP⁺, 66 mM Glucose-6-phosphate, and 66 mM MgCl₂ in H₂O

Description: NADPH is a necessary cofactor in many xenobiotic metabolism reactions. NADPH is required for the measurement of oxidase activity catalyzed by P450s, FMOs, NADPH-P450 reductase, and many other oxidase enzymes. A common source of NADPH in an oxidase enzyme assay is an NADPH regenerating system which generates NADPH *in situ* using an enzymatic reaction. For example, glucose-6-phosphate dehydrogenase (G6PDH) will convert NADP⁺ to NADPH in the presence of the substrate glucose-6-phosphate (Glc-6-PO₄).

The Gentest NADPH regenerating system consists of two reagents, Solution A (NADP⁺ and Glc-6-PO₄) and Solution B (G6PDH). Each reagent is sold separately. Combined, these two reagents form an NADPH regenerating system that can be used for all NADPH requiring oxidase assays (cDNA-expressed enzymes and liver fractions).

General Use: For a typical oxidase activity assay, the recommended concentrations for the components of an NADPH regeneration system are; 1.3 mM NADP⁺, 3.3mM glucose-6-phosphate, 0.4 U/mL glucose-6-phosphate dehydrogenase, and 3.3 mM magnesium chloride. If used at these concentrations, Solutions A and B in the Gentest NADPH Regenerating System are 20X and 100X respectively.

At least 200-400 enzyme assays can be performed using one vial each of Solution A and B. The total number of assays that can be performed is dependent on a researcher's experimental design.

Safety Recommendations:

Safety assessment indicates this product is non-hazardous; therefore no SDS [Safety Data Sheet] is provided.

Handle in accordance with good industrial hygiene and laboratory safety practices.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

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Approved and current. Effective starting 10/11/2022. COA-451220 (version 1.0) COA Gentest NADPH Regenerating System
Solution A

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25 September 2024

Quality Assurance

Date

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