

The Nitrate Elimination Co., Inc. (NECi)
334 Hecla Street, Lake Linden, MI 49945
Toll Free: 1-888-Nitrate

Yeast NAD(P)H: NITRATE REDUCTASE, RECOMBINANT (EC 1.7.1.2)
EXPRESSED IN *Pichia pastoris*
PURIFIED BY AFFINITY CHROMATOGRAPHY
YNaR-1 (NECi Superior Stock NaR)

Product Specifications: Immobilized Metal Affinity Chromatography (IMAC) purified yeast NAD(P)H: nitrate reductase. Modified method of Barbier, GG, WH Campbell (2000) Current Topics in Gene Expression Systems: Program and Abstracts, Abstract PY 4, p. 64.

Specific Activity: 20 - 40 units/mg protein

Activity Supplied: Vials containing 0.5 – 5.0 U/vial, as specified by purchaser

Form: Freeze-dried protein glass containing 50 mM MOPS, pH 7.0, 1mM EDTA (MOPS = 3-[N-Morpholino]propanesulfonic acid) buffer, sugar

General Information:

- **CAS #:** 9029-27-0
- **E.C #:** 1.7.1.2
- **Catalyzes the NADH or NADPH dependent reduction of nitrate to nitrite.**
- **Unit definition:** One unit will reduce 1.0 μ mole of nitrate to nitrite per minute in an NADH system at pH ~7 at 30°C
- **Physical form:** freeze-dried protein glass
- **Storage conditions:** RT (25°C or lower)
- **Shelf life in freeze-dried form:** Stable indefinitely at -20°C. Min 24 months at 4°C. Min 12 months at RT (20 – 25°C). Min 7 days at 37°C.
- **Shelf life in solution:** Working solution in buffer at 1 U/ml: two weeks at 4°C. Working solution containing 25% Glycerol: minimum one year at -20°C.
- **Stability problems:** Thermal denaturation; pH extremes. Use standard precautions for proteins.
- **Expected purity range:** 20 - 40 units/mg protein
- **Impurities & relative %'s:** high mw polymers of nitrate reductase, <5%; fragments of NaR.
- **Additives & relative %'s:** 50 mM MOPS/1 mM EDTA, sugar > 99% of dry weight.
- **Range of protein expected:** 75 - 150 μ g protein/U enzyme
- **Method of protein determination:** Bio-Rad protein assay
- **Range of activity expected:** Controlled at desired units per vial
- **Range of activity, U/gram solid:** 30 – 50 units per gram solid (including buffer and sugars)

1Feb2004 ERC/WHC