Analizator tlenku azotu w próbkach ciekłych

Nitric Oxide Analyzer Liquid Applications

The NOA and purge system measures nitric oxide and its reaction products, nitrite, nitrate and nitrosothiols, in virtually any biological fluid including: cell culture media, plasma, sera, urine, cerebral-spinal fluid, bronchial-alveolar lavage, perfusates, and tissue homogenates.

Nitrite

Nitrite (NO_2^-), the major oxidation product of NO in the absence of oxyhemoglobin or superoxide anion, is formed when nitric oxide reacts with dissolved oxygen. Use the NOA 280i and purge vessel to measure nitrite using iodide and acetic acid at room temperature (Castegnaro, et al., Food Addit. Contam. 1978, 4:37-43).

Nitrosothiols

Nitrosothiols are present at low nanomolar concentrations and formed from the reaction of an NO species with thiols. The 280i, purge vessel and suitable reducing agent can be used to measure nitrosothiols in biological fluids.

Low molecular weight compounds such as S-nitrosoglutathione can be directly measured using a Cu(I)/Cysteine reagent. (Fang, et al., Biochem Biophys Res Comm 1999;252:535-540.)

Higher molecular species such as S-nitroso-albumin or S-nitroso-hemoglobin can be measured using iodide/iodine and acetic acid (Samouilov,et al., Analy Biochem 1998;258:322-330) after removal of nitrite by reaction with the Griess reagent or chromatographic separation. (Marley, et al., Free Rad Res 2000 :32(1):1-9. Gladwin, et al., PNAS 2000;97(18):9943-9948.)

Iron-Bound NO

Nitric oxide bound to iron in heme or other metal centers can be measured by combining the nitrosothiols measurement with and without treatment of the samples with $KCN/K_3Fe(CN)_6$. The difference is the amount of NO bound to the metal center (Gladwin, et al., PNAS 2000;97(21):11482-11487.

Iron-bound NO can be directly measured using a reagent containing acetic acid, $KCN/K_3Fe(CN)_6$, and sulfanilamide (Nagababu, et al., J Biol Chem 2003;278(47): 46349-56.

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