3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Potassium nitrate
Cell Culture Tested

Product Number **P 6030**
Store at Room Temperature

Product Description

Molecular Formula: KNO_3
Molecular Weight: 101.1
CAS Number: 7757-79-1
Melting Point: 333 °C
Synonym: saltpeter[1]

This product is cell culture tested (0.076 mg/ml) and is suitable for use in cell culture applications.

Potassium nitrate is used in industrial applications, including the manufacture of glass, matches, and fluxes, and for the tempering of steel.[1] It is also commonly used in dental research.[2,3] Potassium nitrate is a source of nitrate in studies of plant and bacterial growth.[4,5]

Potassium nitrate has been used in the ion chromatography of transition and heavy metal ions.[6,7] It has also been utilized in the synthesis of thiophenecarboxamides.[8]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (133 mg/ml), yielding a clear, colorless solution.

References

1. The Merck Index, 12th ed., Entry# 7815.
2. Fischer, H., et al., Improved reliability of leucite reinforced glass by ion exchange. Dent. Mater., **16(2)**, 120-128 (2000).
3. Pashley, D. H., et al., The effects of outward forced convective flow on inward diffusion of potassium across human dentin. Am. J. Dent., **15(4)**, 256-261 (2002).
4. Zhang, H., et al., Dual pathways for regulation of root branching by nitrate. Proc. Natl. Acad. Sci. USA, **96(11)**, 6529-6534 (1999).
5. Glazebrook, M. A., et al., Nutrient effects on growth and the production of 5-hydroxy-4-oxonorvaline by *Streptomyces akiyoshiensis*. Can. J. Microbiol., **39(5)**, 536-542 (1993).
6. Shaw, M. J., et al., Dynamic chelation ion chromatography of transition and heavy metal ions using a mobile phase containing 4-chlorodipicolinic acid. J. Chromatogr. A, **953(1-2)**, 141-150 (2002).
7. Cowan, J., et al., The ion chromatographic separation of high valence metal cations using a neutral polystyrene resin dynamically modified with dipicolinic acid. Analyst, **125(12)**, 2157-2159 (2000).
8. Shinkwin, A. E., et al., Synthesis of thiophenecarboxamides, thieno[3,4-c]pyridin-4(5H)-ones and thieno[3,4-d]pyrimidin-4(3H)-ones and preliminary evaluation as inhibitors of poly(ADP-ribose)polymerase (PARP). Bioorg. Med. Chem., **7(2)**, 297-308 (1999).

GCY/RXR 4/03