

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 chloride

Product Number **P 9541** Store at Room Temperature

Product Description

Molecular Formula: KCI Molecular Weight: 74.55 CAS Number: 7447-40-7

This product is designated as Molecular Biology grade and is suitable for molecular biology applications. It has been analyzed for the absence of nucleases and proteases.

Potassium chloride is a widely used reagent in biochemistry and molecular biology. It is a component of phosphate buffered saline (PBS, Product No. P 3813) and of polymerase chain reaction (PCR) buffer (50 mM KCl).¹ KCl is also used in studies of ion transport and potassium channels.^{2,3}

KCl is also utilized in the solubilization, extraction, purification, and crystallization of proteins.^{4,5,6,7} The use of KCl in the crystallization of histone core octamers has been reported.⁸

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (200 mg/ml), yielding a clear, colorless solution. It is also soluble in glycerol.⁹

Storage/Stability

The density of a saturated aqueous KCI solution at 15 °C is 1.172 g/ml.⁸ Solutions of KCI may be autoclaved.¹

References

- Molecular Cloning: A Laboratory Manual, 3rd ed., Sambrook, J. F., et al., Cold Spring Harbor Laboratory Press (Cold Spring Harbor, NY: 2001), pp. 8.6, 8.21, 8.78, A1.27.
- Lang, F., et al., The diversity of volume regulatory mechanisms. Cell. Physiol. Biochem., 8(1-2), 1-45 (1998).
- Braun, M., et al., Diffusion through channel derivatives of the *Escherichia coli* FhuA transport protein. Eur. J. Biochem., **269(20)**, 4948-4959 (2002).
- 4. Huvos, P., and Cox, R. A., Solution of ribosomal proteins under mild conditions. Biochim. Biophys. Acta, **383(4)**, 421-426 (1975).
- Garcia-Hernandez, M., et al., *Arabidopsis* p40 homologue. A novel acidic protein associated with the 40 S subunit of ribosomes. J. Biol. Chem., 269(32), 20744-20749 (1994).
- Rush, C., et al., Purification, crystallisation and preliminary X-ray analysis of the vanadiumdependent haloperoxidase from *Corallina officinalis*. FEBS Lett., **359(2-3)**, 244-246 (1995).
- Wilhelm, H., et al., Purification of recombinant cyclin B1/cdc2 kinase from *Xenopus* egg extracts. Methods Enzymol., **283**, 12-28 (1997).
- Lambert, S. J., et al., Purification of histone core octamers and 2.15 Å X-ray analysis of crystals in KCI/phosphate. Acta Crystallogr. D Biol. Crystallogr., 55(5), 1048-1051 (1999).
- 9. The Merck Index, 12th ed., Entry# 7783.

GCY/RXR 2/03

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.