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ProductInformation

Potassium bicarbonate

Product Number **P 7682**
Store at Room Temperature

Product Description

Molecular Formula: $KHCO_3$
Molecular Weight: 100.1
CAS Number: 298-14-6
Synonyms: potassium hydrogen carbonate, potassium acid carbonate[1]

This product is insect cell culture tested (0.35 mg/ml) and is suitable for use in insect cell culture applications.

Potassium bicarbonate is a widely used reagent in research and industrial applications. It is used in crop fertilization and soil maintenance in agriculture, as a dry powder ingredient in fire extinguishers, and as a catalyst in synthetic fiber polymerization and olefin dehydrogenation.

Potassium bicarbonate has been used in studies of renal disorders and the relationship of muscle injury to this process.[2,3,4] A study on the addition of potassium bicarbonate in conjunction with a lactose-emphasized diet in rats and its effect on short-chain fatty acid production has been reported.[5] Potassium bicarbonate has been shown to inhibit the growth of *Aspergillus parasiticus* in Czapek's agar, and also aflatoxin synthesis.[6]

An HPLC protocol for the separation and quantitation of nucleotides, nucleosides, and purine bases that uses potassium bicarbonate in the neutralization of tissue extracts has been published.[7] In materials science research, a study on the self assembly of fluid-filled potassium bicarbonate microfibers has been described.[8]

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (100 mg/ml), yielding a clear, colorless solution.

References

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2. Frassetto, L. A., et al., Comparative effects of potassium chloride and bicarbonate on thiazide-induced reduction in urinary calcium excretion. Kidney Int., **58(2)**, 748-752 (2000).
3. Lindinger, M. I., et al., $NaHCO_3$ and $KHCO_3$ ingestion rapidly increases renal electrolyte excretion in humans. J. Appl. Physiol., **88(2)**, 540-550 (2000).
4. Moore, K. P., et al., A causative role for redox cycling of myoglobin and its inhibition by alkalinization in the pathogenesis and treatment of rhabdomyolysis-induced renal failure. J. Biol. Chem., **273(48)**, 31731-31737 (1998).
5. de Groot, A. P., et al., Effects of a dietary load of acid or base on changes induced by lactose in rats. Food Chem. Toxicol., **33(1)**, 1-14 (1995).
6. Montville, T. J., and Goldstein, P. K., Sodium bicarbonate reduces viability and alters aflatoxin distribution of *Aspergillus parasiticus* in Czapek's agar. Appl. Environ. Microbiol., **53(10)**, 2303-2307 (1987).
7. Wynants, J., and Van Belle, H., Single-run high-performance liquid chromatography of nucleotides, nucleosides, and major purine bases and its application to different tissue extracts. Anal. Biochem., **144(1)**, 258-266 (1985).
8. Celio, H., et al., Self-assembly of fluid-filled $KHCO_3$ microfibers. J. Am. Chem. Soc., **125(11)**, 3302-3310 (2003).

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