Sodium bicarbonate
SigmaUltra

Product Number  S 6297
Store at Room Temperature
Replacement for Product Code 43,144-3

Product Description
Molecular Formula:  NaHCO₃
Molecular Weight:  84.01
CAS Number:  144-55-8
pKₐ:  6.37, 10.25 (carbonic acid)
Synonyms:  sodium hydrogen carbonate, sodium acid carbonate, baking soda

Trace elemental analyses have been performed on the SigmaUltra sodium bicarbonate. The Certificate of Analysis provides lot-specific results. SigmaUltra sodium bicarbonate is for applications which require tight control of elemental content.

Sodium bicarbonate occurs in nature as the mineral nacholite. It is used in the production of many sodium salts and as a source of carbon dioxide. Manufacturing applications of sodium bicarbonate include fire extinguishers and cleaning compounds.¹

Bicarbonate is an important agent of pH regulation in vivo and the intracellular transport of sodium bicarbonate has been widely investigated.² ³ ⁴

Sodium bicarbonate is used as a buffer in biochemistry, molecular biology, and chromatography. The use of sodium bicarbonate in cell culture media has been discussed.⁵ A review of methods of analysis for ochratoxin A from plasma and foods that includes the use of sodium bicarbonate has been published.⁶ A protocol has been reported on the separation of inorganic and organic arsenic species by HPLC in tandem with ICP mass spectrometry.⁷ The copper-mediated cleavage of histidine-containing peptides in sodium bicarbonate buffer has been studied.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. At 25 °C, the pH of a freshly prepared 0.1 M aqueous solution of sodium bicarbonate is 8.3.¹

References
1. The Merck Index, 12th ed., Entry# 8726.