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ProductInformation

Calcium carbonate

Product Number **C 3049**
Store at Room Temperature
39,810-1 is an exact replacement for C 3049

Product Description

Molecular Formula: $CaCO_3$
Molecular Weight: 100.1
CAS Number: 471-34-1
Synonym: calcite

This product is designated as a Chelometric Standard and as ACS Reagent grade. It meets the specifications of the American Chemical Society (ACS) for reagent chemicals.

Calcium carbonate is a material that is widely found in nature, and is commonly referred to as calcite. It comprises about 4% (by weight) of the Earth's crust and is present in many different environments and forms. These include rivers and oceans in dissolved form, sedimentary environments as limestone, carbonatite-lava in a molten form, and in such geological formations as stalactites and stalagmites. Plants and animals utilize calcium carbonate to form their skeletons and shells.[1,2]

Calcium carbonate is used in such processes as the manufacture of paper, paints, glass, and ceramics, the compounding of polymers, environmental applications such as waste water treatment, and as an extender in paints and coatings.[3]

An investigation of the formation of calcium carbonate deposits in the pineal gland of the human brain by microscopy and spectroscopy has been reported.[4] The precipitation of calcium from bicarbonate-buffered Krebs-Henseleit-type mammalian physiologic saline, in the form of calcium carbonate, has been examined.[5]

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble at a concentration of 66 mg/ml in H_2O:HCl (13:2), yielding a clear, colorless solution.

References

1. Wilt, F. H., Matrix and mineral in the sea urchin larval skeleton. J. Struct. Biol., **126(3)**, 216-226 (1999).
2. Marshall, A. T., Occurrence, distribution, and localisation of metals in cnidarians. Microsc. Res. Tech., **56(5)**, 341-357 (2002).
3. The Merck Index, 12th ed., Entry# 1697.
4. Baconnier, S., et al., Calcite microcrystals in the pineal gland of the human brain: first physical and chemical studies. Bioelectromagnetics, **23(7)**, 488-495 (2002).
5. MacConaill, M., Calcium precipitation from mammalian physiological salines (Ringer solutions) and the preparation of high [Ca] media. J. Pharmacol. Methods, **14(2)**, 147-155 (1985).

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