



Specification

**Church & Dwight Co., Inc. Arm & Hammer™
Sodium Bicarbonate USP Grade 5**

Specification

	United States Pharmacopoeia	Food Chemicals Codex
Description	Sodium Bicarbonate contains not less than 99.0 percent and not more than 100.5 percent of NaHCO ₃ calculated on the dried basis.	A white crystalline powder. It is stable in dry air, but slowly decomposes in moist air. Its solutions, when freshly prepared with cold water, without shaking, are alkaline to litmus. The alkalinity increases as the solutions stand, are agitated or are heated.
Identification	A solution of it responds to the tests for sodium and bicarbonate.	A 1 in 10 solution gives positive tests for sodium and for bicarbonate.
Loss on Drying	Not more than 0.25% of its weight.	Not more than 0.25% by weight
Insoluble Substances	Dissolve 1 g in 20 ml of water; the resulting solution is complete and clear.	Passes test
Normal Carbonate	Meets test.	-
Chloride	Not more than 0.015%	-
Limit of Sulfur Compounds	Not more than 0.015%	-
Arsenic	Not more than 2 ppm	-
Heavy Metals	Not more than 5 ppm	-
Limit of Ammonia	Meets requirements.	Passes test
Residual Solvents	Meets requirements.	-
Assay – dry basis	Not less than 99.0% and not more than 100.5% of NaHCO ₃	Not less than 99% NaHCO ₃ after drying
Lead	-	Not more than 2 mg/Kg

Granulation (Coarse Granular)

Sieve Size (USS)	Microns	Ro-Tap Cumulative % Retained	
		Minimum	Maximum
60	250	0	8
70	210	0	35
100	149	55	100
170	88	93	100

Reviewed: January 19, 2015



CHURCH & DWIGHT CO., INC.

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General Properties (Not Specifications)

Empirical Formula	NaHCO ₃
CAS Number	144-55-8
Other Names	Bicarbonate of Soda Sodium Hydrogen Carbonate Baking Soda
Chemical Abstract Name	Carbonic acid monosodium salt
E Number	E-500(ii)
Appearance	White crystalline powder
Taste	Slightly alkaline
Molecular Weight	84.01
Thermal Decomposition	Decomposes without melting into Na ₂ CO ₃ , H ₂ O and CO ₂ .
Crystal Density	137.3 lb /ft ³ , 2.2 g / cc
BTU / lb at 72°F	0.249
Solubility in water at 77°F	Approximately 9.5%
Solubility in Alcohol	Insoluble
Alkali Equivalent	1 lb NaHCO ₃ = 0.369 lb Na ₂ O
Acid Equivalent	1 lb NaHCO ₃ = 0.435 lb HCl
Carbon Dioxide Equivalent	1 lb NaHCO ₃ = 0.524 lb CO ₂
pH 1% aqueous soln at 77°F	Approximately 8.3

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