

**The Draft Amendment of Standards for Specification, Scope, Application
and Limitation of Food Additives**

MOHW Food No. 1091301343, 01 July, 2020

Appendix 1:

07. Food quality improvement, fermentation and food processing agents

Code	Food Additive Items	Scope and Application Standards	Limitations
<u>098</u>	<u>Carbon dioxide</u>	<u>All foods: as practically needed.</u>	<u>For manufacturing or processing purpose.</u>

Appendix 2: Standards for Specification of Food Additives

07. Food quality improvement, fermentation and food processing agents

§ 07098

Carbon Dioxide

SYNONYMS

INS No. 290

Definition

C.A.S. number

124-38-9

Chemical formula

CO₂

Formula weight

44.01

Assay

Not less than 99.5% (v/v)

DESCRIPTION

Colourless, odourless gas, 1 litre of which weighs about 1.98 g at 0° and 760 mm of mercury. Under a pressure of about 59 atmospheres it may be condensed to a liquid, a portion of which forms a white solid (Dry Ice) upon rapid evaporation. Solid carbon dioxide evaporates without melting upon exposure to air. Commercial carbon dioxide is shipped and handled in pressurized cylinders or low pressure bulk liquid systems, or in solid blocks.

Characteristics

The following specifications apply to gaseous carbon dioxide as produced from its condensed liquid or solid phase by evolution to the gas phase at normal environmental conditions.

IDENTIFICATION

Precipitate formation

When a stream of the sample is passed through a solution of barium hydroxide, a white precipitate is produced which dissolves with effervescence in dilute acetic acid.

Detector tube test

Passes test

PURITY

Acidity

Transfer 50 ml of water, previously boiled and cooled to

	<u>room temperature, into a Nessler tube. Introduce 1,000 ml of the sample into the water through a tube (1 mm internal diameter) keeping the opening of the tube within 2 mm from the bottom of the vessel. Add 0.1 ml of methyl orange TS. The red colour produced is not darker than the colour of an identical control solution to which has been added 1.0 ml of 0.01 N hydrochloric acid instead of the carbon dioxide.</u>
<u>Phosphine, hydrogen sulfide, and other organic reducing substances</u>	<u>Transfer 25 ml of silver ammonium nitrate TS and 3 ml of ammonia TS into a Nessler tube. In the absence of light, introduce 1,000 ml of the sample in the same manner as in the test of Acidity. No brown colour is produced.</u>
<u>Carbon monoxide</u>	<u>Not more than 10 µL/L</u>
<u>Non-volatile hydrocarbons</u>	<u>Not more than 10 mg/kg</u>
<u>Volatile hydrocarbons</u>	<u>Not more than 50 µL/L</u>
<u>Water</u>	<u>Passes test</u>
<u>Category</u>	<u>Food additives category (07).</u>
<u>Functional uses</u>	<u>Food quality improvement, fermentation and food processing agents.</u>