

DISODIUM CARBONATE

IUCLID5 FILE EXTRACT, SECTION 1.4

1.4 Analytical information

Analytical information

Analytical methods and spectral data - X-ray diffraction
- IR spectroscopy
- Total alkalinity

Optical activity The substance is not optically active.

Results of analysis

Analysis type	X-ray diffraction
Tested substance	sodium carbonate
Remarks	X-ray powder diffraction spectroscopy is commonly used to identify crystalline substances by comparing diffraction data against a database maintained by the International Centre for Diffraction Data (ICDD)

Analysis type	IR spectroscopy
Tested substance	sodium carbonate
Remarks	IR spectroscopy is used to identify a substance by comparing it by a reference spectrum.

Analysis type	Total alkalinity
Tested substance	sodium carbonate
Method used	European Pharmacopoeia, sodium carbonate anhydrous monograph, 01/2008:0773 and US Pharmacopeia NF 27 Official monographs Na ₂ CO ₃ , Assay.
Remarks	With total alkalinity the carbonate content of the substance can be determined.

Analysis type	ICP-OES
Tested substance	sodium carbonate
Method used	ISO 11885:2007
Remarks	With ICP-OES the cationic impurities (e.g. potassium, aluminium, silicon, iron, magnesium) contents in the substance can be determined. These impurities can be present at low concentrations (normally ppm level).

Analysis type	Ion chromatography
Tested substance	sodium carbonate
Method used	ASTM D4327-2003
Remarks	With ion chromatography for example the sulphate, chloride and fluoride contents in the substance can be determined.

Analysis type	UV/Vis
Tested substance	sodium carbonate
Remarks	UV/Vis is not relevant to identify or analyse an inorganic substance like sodium carbonate because there are no absorption maxima between 200 and 750 nm.

Analysis type High Pressure Liquid Chromatography

Tested substance sodium carbonate

Remarks High-pressure liquid chromatography is not relevant to identify or analyse an inorganic substance like sodium carbonate.

Analysis type Gas chromatography

Tested substance sodium carbonate

Remarks Gas chromatography is not relevant to identify or analyse an inorganic substance like sodium carbonate.

Analysis type NMR

Tested substance sodium carbonate

Remarks NMR is not relevant to identify or analyse an inorganic substance like sodium carbonate.

Analysis type Mass spectrometry

Tested substance sodium carbonate

Remarks Mass spectrometry is not relevant to identify or analyse an inorganic substance like sodium carbonate.