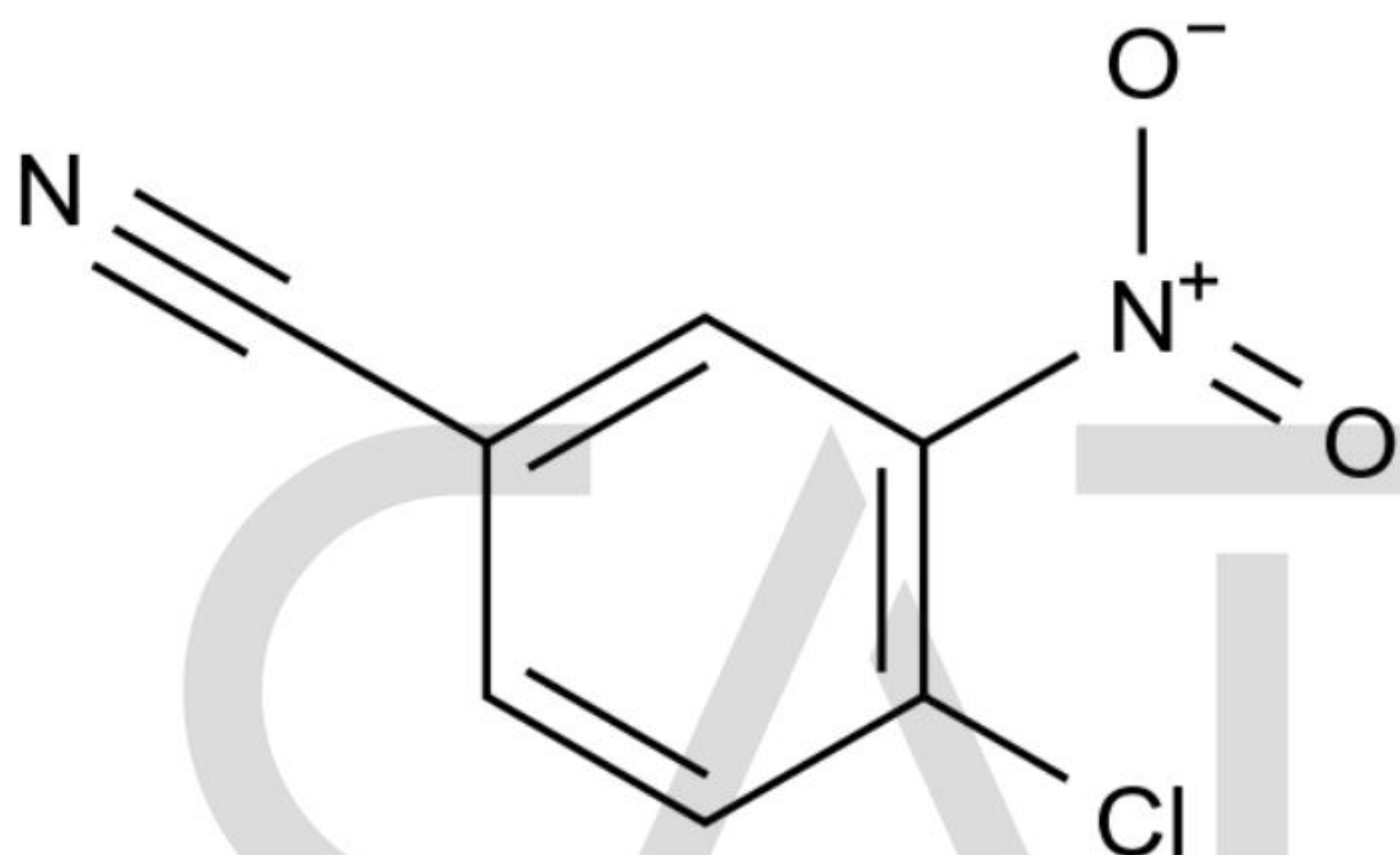


Certificate of Analysis

Reference Material & Standard

Product Name:	4-Chloro-3-nitrobenzonitrile	Catalogue Number:	C1788823
Synonyms:	N/A	Lot Number:	0712-RF-0109
CAS Number:	939-80-0	Expiry Date:	Jul 16, 2028
Molecular Formula:	C ₇ H ₃ ClN ₂ O ₂	Storage:	Room Temp Protected from light and Sealed
Molecular Weight:	182.56	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Off-White Solid
Identification	GCMS&HNMR	Confirmed
Purity	GC	98.402%
Loss On Drying	TGA	0.4998%
Assay		97.9%
Uncertainty		±2.0%

Comment:

1. The calculation of the 100% method follows the formula (calculated on the non-dried basis):

Assay (%) = (100% - Loss On Drying) * Purity GC (%) / 100%

Loss On Drying is considered as absolute effect, GC purity is considered as relative effect.

2. The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

Prepared by:

Nice

Reviewed by:

Lisa

Approved by General Manager:

David

Date: Jul 17, 2024

Date: Jul 18, 2024

Date: Jul 18, 2024

