Certificate of Analysis

Reference Material & Standard

Product Name:	4-Chlorotoluene	**Catalogue Number:**	CCPD101048
Synonyms:	N/A	**Lot Number:**	0221-RD-0024
CAS Number:	106-43-4	**Expiry Date:**	Jun 30, 2028
Molecular Formula:	C7H7Cl	**Storage:**	Room Temp Protected from light and Sealed
Molecular Weight:	126.58	**Warning:**	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Colourless Liquid
Identification	GCMS&HNMR	Confirmed
Purity	GC	99.126%
Water Content	Karl Fischer	0.1007%
Assay		99.0%
Uncertainty		±2.0%

CATO Research Chemicals Inc.

Comment:

1. The calculation of the 100% method follows the formula (calculated on the non-dried basis):
*Assay (%) = (100%-Water Content) * Purity GC (%) /100%*
Water Content 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: Alice Date: Jul 01, 2024

Reviewed by: Lisa Date: Jul 01, 2024

Approved by General Manager: David Date: Jul 01, 2024

CATO Research Chemicals Inc.