



CERTIFICATE OF ANALYSIS

Product Name: 4-NITROPHENOL
(Isotopic Label & Enrichment Specification) (RING-D4, 98%)

Lot Number: PR-19403A

Catalog Number: DLM-296-0

Product Information

Chemical Purity Specification: $\geq 98\%$
Labeled CAS Number: NA
Unlabeled CAS Number: 100-02-7
MW of fully enriched product: 143.13
Chemical Formula: HOC6D4NO2
Storage: Store at room temperature away from light and moisture.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

The retest date for this chemical has been designated based on CIL's experience in working with chemical standards for over 30 years, and includes review of actual analytical results and relevant literature references. The retest date is valid only for unopened vials or ampoules that have been stored as recommended.

Approved by: *Jeffrey O'Neill*

Jeffrey O'Neill, Quality Assurance

Quality Control Tests and Results

1H NMR for Chemical Purity	Pass
GC/MS for Chemical Purity	100%
GC/MS for Isotopic Enrichment	99.1%
Melting Point Range Determination	110-114°C

Retest/Review Date: 08/04/13