



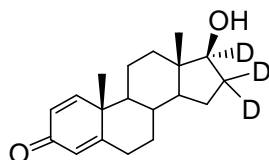
REFERENCE MATERIAL PRODUCT INFORMATION SHEET

Report ID: D581b.2018.01 (Ampouled 150401)

This batch of ampoules was prepared from the bulk material on 1st April 2015.

Compound Name: **d₃-Boldenone**
Collection Number: D581B
Chemical Formula: C₁₉H₂₃D₃O₂
CAS Number: 361432-76-0
Structure:

Description: Off white crystals
Batch Number: 04-S-10
Molecular Weight: 289.4
Release Date: 17th November 2004



Synonyms: d₃-Androst-1,4-diene-17β-ol-3-one, d₃-1,4-Androstadiene-17β-ol-3-one
d₃-17β-Hydroxy-1,4-androstediene-3-one, d₃-dehydrotestosterone

The main component of this material is d₃-boldenone, d₃-, d₂-, d₁- and d₀-boldenone are also present. The stated mass of the analyte per ampoule represents the combined masses of deuterated (d₃, d₂ and d₁) and d₀-boldenone in the material.

The material is supplied as a dried aliquot in a sealed ampoule and is intended for a single use to prepare a standard solution containing D581b. Each ampoule contains approximately 932 μg of anhydrous boldenone (d₃, d₂, d₁ and d₀). Open the ampoule and carefully rinse the interior at least three times with a suitable organic solvent (chloroform).

The isotopic purity of this material is an estimate only. This material should be considered for use as an internal standard only.

Isotopic Purity: d₃ ≈ 92.9% [= (d₃ / d₀ + d₁ + d₂ + d₃) × 100]
d₀ < 2.4% [= (d₀ / d₀ + d₁ + d₂ + d₃) × 100]

GC-FID: Instrument: Agilent 6890N
Column: HP-1, 30 m × 0.32 mm I.D. × 0.25 μm
Program: 180 °C (1 min), 40 °C/min to 250 °C (10 min), 40 °C/min to 300 °C (2 min)
Injector: 250 °C Detector Temp: 320 °C
Carrier: Helium Split ratio: 20/1
Relative peak area response of main component
Initial analysis: Mean = 97.8%, s = 0.08% (7 ampoules in duplicate, April 2015)
Re-analysis: Mean = 98.8%, s = 0.03% (5 ampoules in duplicate, March 2018)

The following analytical data was obtained on the bulk material subsequently used in the preparation of the ampoules.

Purity estimate obtained from a combination of traditional analytical techniques. The purity estimate by traditional analytical techniques was obtained by subtraction from 100 % of total impurities by GC-FID, thermogravimetric analysis and Karl Fischer analysis. Supporting evidence is provided by elemental microanalysis and ¹H NMR.

GC-FID:	Instrument:	Agilent 6890N
	Column:	HP-1, 30 m × 0.32 mm I.D. × 0.25 μm
	Program:	180 °C (1 min), 40 °C/min to 250 °C (10 min), 40 °C/min to 300 °C (2 min)
	Injector:	250 °C
	Carrier:	Helium
		Detector Temp: 320 °C
		Split ratio: 20/1
	Relative peak area response of main component	
	Initial analysis:	Mean = 99.0%, s = 0.02% (10 sub samples in duplicate, August 2004)
	Re-analysis:	Mean = 98.9%, s = 0.01% (5 sub samples in duplicate, September 2008)
	Re-analysis:	Mean = 98.1%, s = 0.04% (7 sub samples in duplicate, April 2015)
Thermogravimetric analysis:	Volatile content < 0.1% and non volatile residue < 0.2% mass fraction (August 2004 & August 2005)	
Karl Fischer analysis:	Moisture content 0.9% mass fraction (September 2008)	
	Moisture content 5.6% mass fraction (March 2015)	

Expiration of certification

The property values are valid till 8th March 2021, i.e. three years from the date of re-certification provided the **unopened** material is handled and stored in accordance with the recommendations below. The material as issued in the unopened container and stored as recommended below should be suitable for use beyond this date, subject to confirmation of batch stability from the issuing body.

The expiry date/shelf life does not apply to ampoules that have been opened. In such cases it is recommended that the end-user conduct their own in-house stability trials.

The long-term stability of the compound in solution has not been examined.

This material has been given a shelf life of three years from the date of re-certification.

This material has demonstrated stability over a minimum period of three years. The measurement uncertainty at the 95% coverage interval includes a stability component which has been estimated from annual stability trials.

Homogeneity assessment

The homogeneity of the material was assessed using purity assay by GC-FID on seven randomly selected ampoules of the material. The material was judged to be sufficiently homogeneous at this level of sampling as the variation in analysis results between samples was not significantly different at a 95% confidence level from that observed on repeat analysis of the same sample.

Recommended storage

When not in use this material should be stored at or below 4 °C in a closed container in a dry, dark area.

Intended Use

For *in vitro* laboratory analysis only.

Caution

Treat as hazardous substance. Use appropriate work practices when handling to avoid skin or eye contact, ingestion or inhalation of dust.

Legal notice

Neither NMI nor any person acting on NMI's behalf assumes any liability with respect to the use of, or for damages resulting from the use of, this reference material or the information contained in this certificate.

Authorised by:

S. R. Davies

Dr Stephen R. Davies,
Team Leader,
Chemical Reference Materials, NMI.
Dated: 29 March, 2018.

Characterisation data and property values specified in this report supersede those in all reports issued prior to 29th March, 2018.