

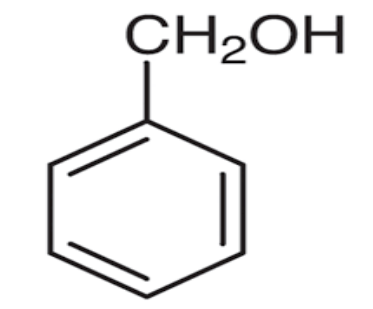
Characterization methods are Accredited according to **ISO 17034:2016**

PRODUCT INFORMATION SHEET OF REFERENCE MATERIAL

BENZYL ALCOHOL

IUPAC Name: Phenylmethanol
CAS No: 100-51-6

Structure:



Identification:

Version No.: 00	Certificate No: SRD/RM/B-03/26/001
Lot No.: RM/B/003/1	Catalogue Number: B-03
Unit Quantity: 100mL	Chemical Formula: C ₇ H ₈ O
Molecular Weight: 108.14 g/mol	Assigned value : 99.82 percent
Date of issue : 15/06/2026	uCRM = ± 0.30
Manufacturing: June 2026	Valid up to : May 2028
Storage: Keep container tightly closed, store between 2°C to 30°C.	

Description

A clear, colorless liquid.



Uncertainty

The assigned Uncertainty covers uncertainty contribution from Characterization, In homogeneity, Storage & transport stability etc (wherever applicable) , is the combined standard Uncertainty ,calculated using a coverage factor ($K= 2$) which gives a level of confidence of approx.95%. As per ISO 17034:2016 &ISO Guide 35 &ISO 33405:2024, for this pharmaceutical standard assigned uncertainty value is considered to be negligible w.r.t. defined limits of method specific assays for which the SRD/CRM is used.

Metrological Traceability and Measurement methods

Assigned value is traceable to SI and through use of Standard mass balance methods (Physical & Chemical) and higher level standard (USP) with Inter Laboratory Collaborative studies using Pharmacopeia standards specifications. Characterization done by combination of Primary Reference Methods viz. $^1\text{H-NMR}$, Mass by GCMS, with use of pure substance/traceable RM/CRM in compliances with ISO Guide 35,33405:2024 & ISO/IEC-17025.

Commutability

Not Applicable

Intended Use

This reference material is intended for use in R&D and G.C reference standard. This material cannot be used drug” or drug raw material.

Instruction for handling and use

Do not dry, use on the as is basis. The internal pressure of the container may be slightly different from atmospheric pressure at the user’s location. Open slowly and carefully to avoid dispersion of the material.

Validity

Stated Validity is applied, when material stored under recommended conditions with proper handling.

Associated uncertainty:

The associated uncertainty U_{CRM} reported with the certified values is calculated as combined expanded uncertainty $U_{\text{CRM}}=k.U_{\text{CRM}}$ in accordance with EA 4/02 with $k=2$ as the coverage factor for a 95 % coverage probability.

The combined uncertainty U_{crm} is derived for combination of the squared uncertainty contribution:

$$U_{\text{CRM}} = \sqrt{U^2_{\text{Charaterisation}} + U^2_{\text{Homogeneity}} + U^2_{\text{Stability}}}$$

$U_{\text{Charaterisation}}$: Is the uncertainty in accordance with ISO/IEC 17025 which includes the contribution of the primary reference material and the measuring system.



$U_{\text{Homogeneity}}$: Is the between bottle variance in accordance with ISO 17034. The assessment of homogeneity is performed by analysis of a representative number of systematically chosen samples units.

$U_{\text{Stability}}$: Is the uncertainty obtained from short term and long term stability in accordance with ISO 17034. The Stability studies are the basis for the quantification of the expiry date of this volumetric standard for the unopened bottle.

ASSAY vs. USP Reference Standard (1061901) (as is basis)

ASSAY VALUE

99.82%

vs. USP

R097X0

Labeled Content = 1.00 mg/mg

METHOD: GC (ref.: Benzyl Alcohol, Current Compendial monographs)

Column: DB-624, 30 m X 0.53 mm I.D., 3.0 μ m film thickness

Carrier Gas: N₂ , Linear Velocity 35 cm/sec

Inlet Temperature: 200 °C, Injection Volume: 0.5 μ L

Injection Mode: Split ratio: 20:1

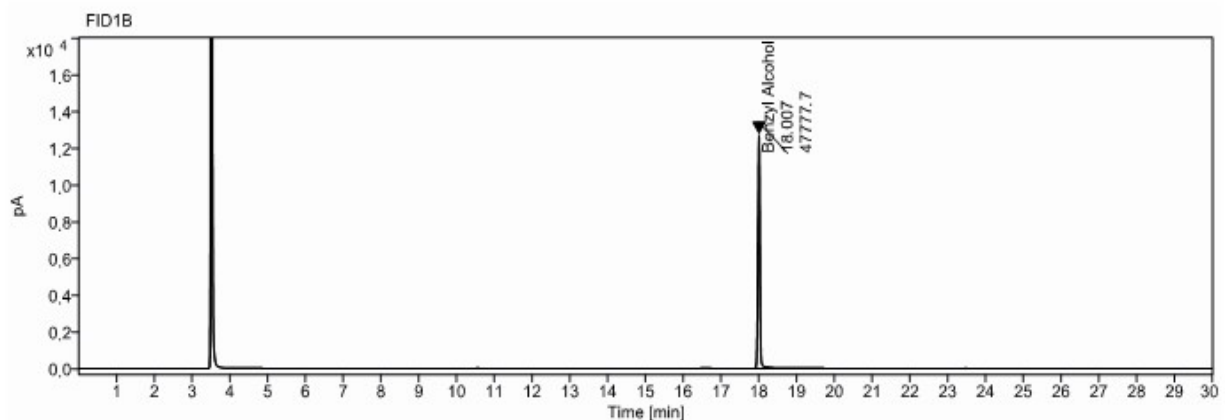
Temperature Program: 50 °C (Hold 5 min) @ 10 °C/min to 220 °C (Hold 8 min)

Detector: FID

Detector Temperature: 310 °C

Certification Process Details: The Certified purity is determined by GC-FID by comparing with USP reference standard.

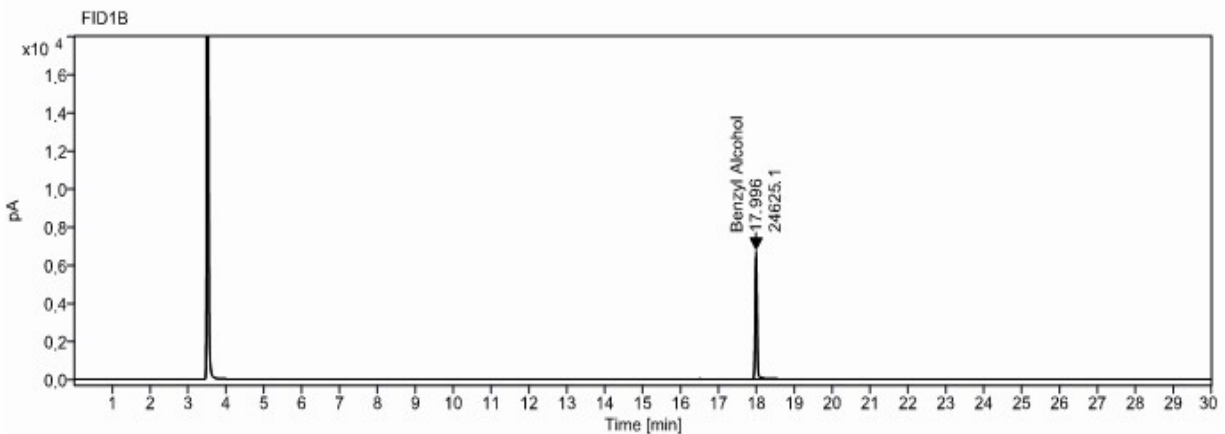
Representative Chromatogram from USP Reference Standard Lot No: R097X0





CERTIFIED PURITY BY GC-FID:

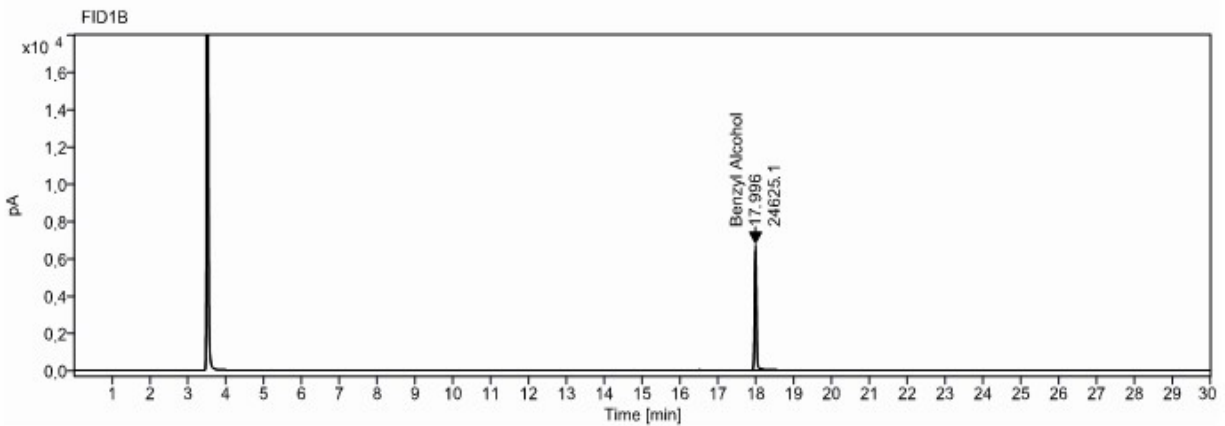
Representative Chromatogram from SRD Lot No: RM/B/003/1



CHROMATOGRAPHIC IMPURITY ANALYSIS:

METHOD: GC (ref.: Benzyl Alcohol, Current Compendial monographs)

Representative Chromatogram from SRD Lot No: RM/B/003/1



See GC Purity

Impurities Detected

Total Impurities: 0.18%



WATER BY KARL FISHER:

Method: Karl Fischer (Ref.: Current Compendial Monographs)

Mean of three measurements, Water Content = 0.01%

RESIDUE ANALYSIS:

Method: Evaporation (ref.: Current Compendial Monographs)

Sample Size: 50 gm (50 x 1.042= 52.1 mL)

Measurements, Residue = None

DENSITY:

Anton Par DMA38 Density meter

Temperature: 25.0 °C

Mean of three measurements =1.042 g/cm³

REFRACTIVE INDEX:

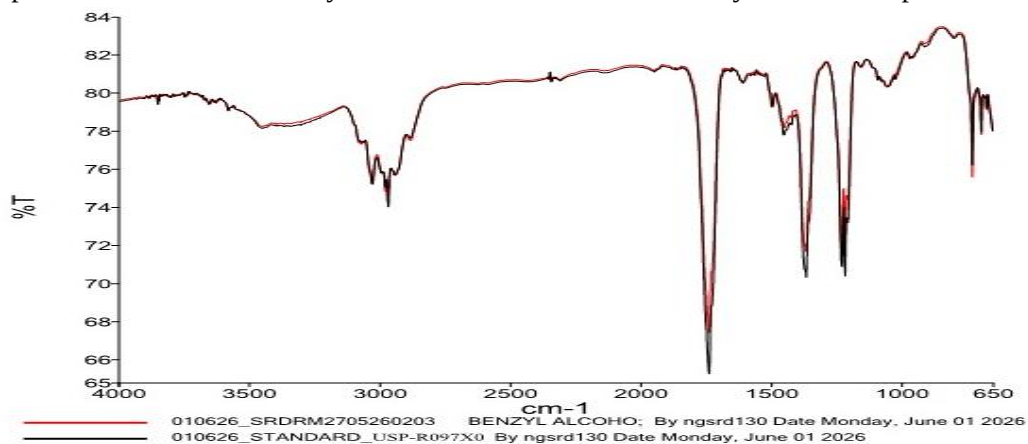
Method: Refractive Index (ref.: Current Compendial Monographs)

Sample Size: 1.5gm

Measurements, RI = 1.5397

IDENTIFICATION TEST: INFRARED SPECTROPHOTOMETRY:

(Comparative identification analysis demonstrates direct traceability to Pharmacopeial standards)

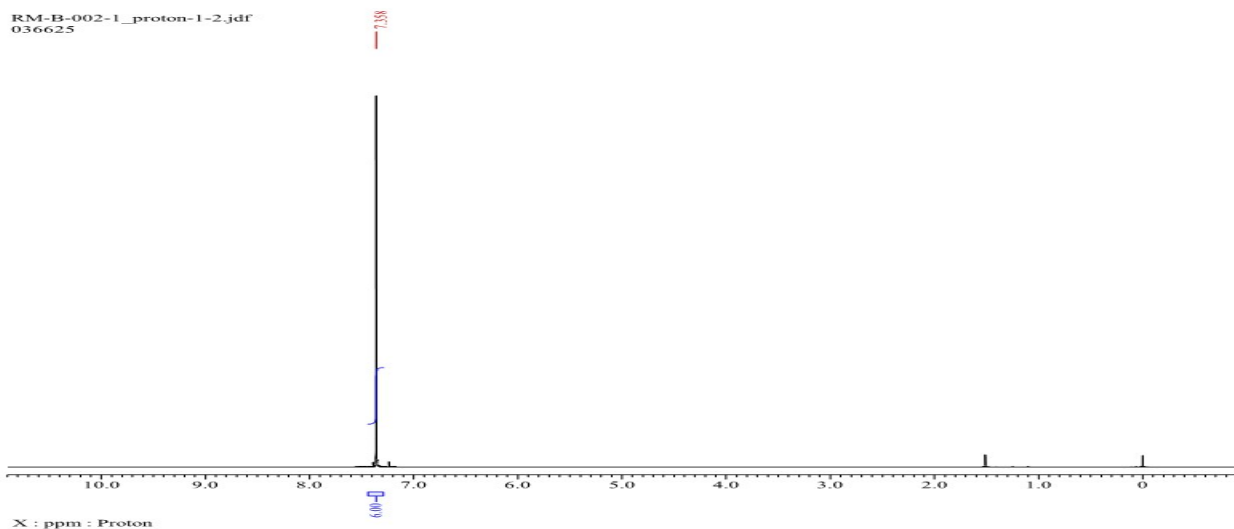


Sabiha Research and Development vs. USP Lot: **R097X0 (1061901)**



1H-NMR:

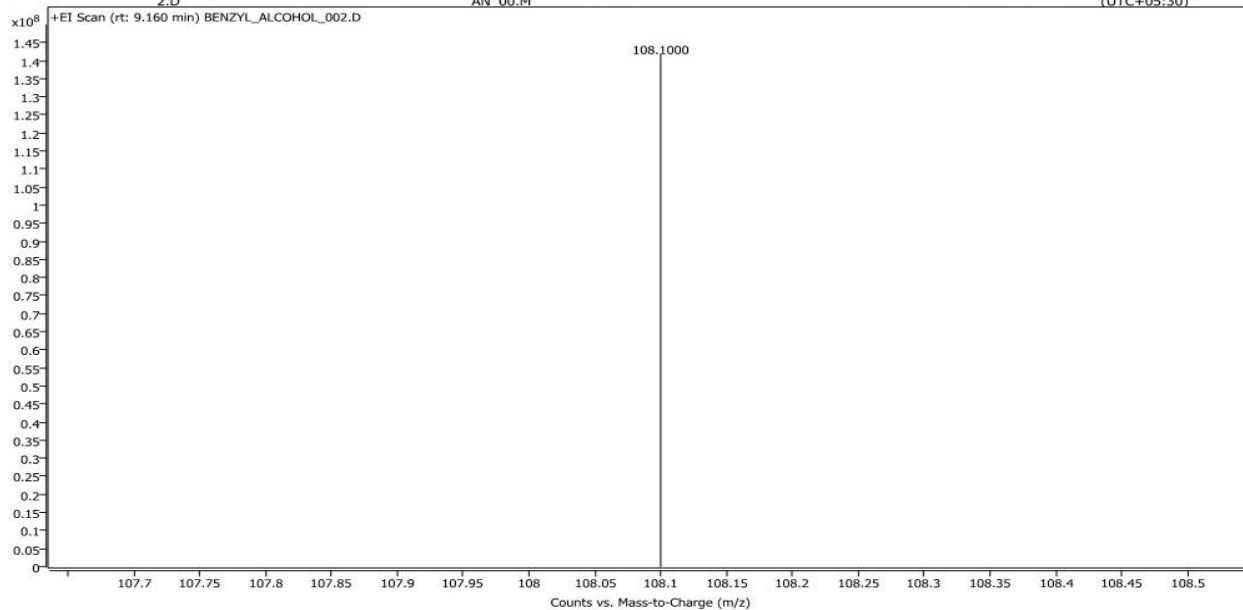
RM-B-002-1_proton-1-2.jdf
036625



The Material confirms to 1H-NMR

Mass (By GCMS):

Name	BENZYL_ALCOHOL	Rack Pos.	Instrument	GCMSMS01	Operator	SRDQCPC10\mmsrd12
Inj. Vol. (ul)	1	Plate Pos.	IRM Status			
Data File	BENZYL_ALCOHOL_00	Method (Acq)	BENZYL_ALCOHOL_SC	Comment	Acq. Time (Local)	01-06-2026 15:41:26 (UTC+05:30)
	2.D		AN_00.M			



The Material confirms to MASS (By GCMS).



Accreditation:

The laboratory of Sabiha Research and Development Ltd. (RMP Division), is Accredited as per ISO 17034:2016; General requirements for the competence of reference material producers and ISO/IEC 17025 General requirement for the competence of testing and Calibration Laboratories.

Safety Information

Refer to the material safety data sheet.

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Approving Officer

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