



Certificate of Calibration

NPL CERTIFIED REFERENCE MATERIAL

Cylinder Number: D914017

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CUSTOMER: LCSE

ADDRESS: CEA Saclay, Bat 714, Site de l'Orme des Merisiers, Chemin de Saint Aubin – RD 128, F-91191 Gif sur Yvette Cedex, France

CALIBRATION DATE: 12 October 2021

CERTIFIED AMOUNT FRACTION:

Component	Amount fraction / ($\mu\text{mol/mol}$)	Component	Amount fraction / ($\mu\text{mol/mol}$)
Acetaldehyde	1.04 ± 0.11	1,2,4-trifluorobenzene	1.05 ± 0.06
Methanol	0.88 ± 0.09	Toluene	1.12 ± 0.06
Ethanol	0.97 ± 0.10	Hexamethylcyclotrisiloxane	1.21 ± 0.13
Isoprene	0.705 ± 0.036	<i>m</i> -xylene	1.12 ± 0.06
Acetone	0.99 ± 0.05	Octamethylcyclotetrasiloxane	1.39 ± 0.14
Dimethyl sulfide	0.80 ± 0.08	1,2,4-trimethylbenzene	1.23 ± 0.13
Acetonitrile	1.24 ± 0.13	+3-carene	1.12 ± 0.12
Perfluorotributylamine	1.10 ± 0.11	Decamethylcyclopentasiloxane	1.38 ± 0.14
3-buten-2-one	1.03 ± 0.11	1,2,4-trichlorobenzene	1.36 ± 0.14
Butan-2-one	1.10 ± 0.06	Nitrogen	Balance
Benzene	0.950 ± 0.048	-	-

The reported expanded uncertainties are based on standard uncertainties multiplied by a coverage factor $k = 2$, providing a coverage probability of approximately 95 %.

METHODS: Preparation: gravimetry; Analysis: gas chromatography (FID & MS)

TRACEABILITY: The values on this certificate are traceable to NPL Primary Standards

EXPIRY: Certificate valid for 1 year from the date of issue

PRESSURE: Fill pressure: 104 bar; Minimum utilisation pressure: 10 bar

STORAGE: No special precautions are required

HANDLING: Refer to ISO 16664

OUTLET: BS 341 No. 15 valve

INTENDED USE: Calibration standard

Reference: 2021030129

Date of issue: 20 October 2021

Signed:  (Authorised Signatory)

Name: Dr D R Worton (on behalf of NPLML)

Checked by: 

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