

Rev.13	<b>METHANOL BP SPECIFICATION</b>		<b>Reference</b>
			<b>BP-2023</b>
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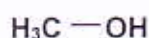
Sr.No.	Test	Specification	Method of Analysis No.
1	Appearance	Clear, colourless volatile, hygroscopic liquid.	QC/PH-FG/SPEC/09-01
2	Solubility	Miscible with water and with methylene chloride.	QC/PH-FG/SPEC/09-02
3.	Boiling point	About 64°C.	QC/PH-FG/SPEC/09-03
4	Identification		QC/PH-FG/SPEC/09-04
	a) Refractive index at 20±0.5°C	1.328 to 1.330 at 20±0.5°C	
	b) By IR	Comparison with Ph. Eur. Reference spectrum of methanol.	QC/PH-FG/SPEC/09-05
5	Appearance of solution	The substance to be examined is clear and colourless.	QC/PH-FG/SPEC/09-06
6	Acidity or alkalinity	Not more than 0.9 ml of 0.01M sodium hydroxide is required to change the colour of the indicator to pink.	QC/PH-FG/SPEC/09-07
7	Relative density at 20°C	0.791 to 0.793 at 20°C	QC/PH-FG/SPEC/09-08
8	Absorbance		QC/PH-FG/SPEC/09-09
	At 230 nm	Maximum 0.15	
	At 250 nm	Maximum 0.05	
	At 270 nm	Maximum 0.02	
	At 290 nm	Maximum 0.01	
	Between 230 nm to 290 nm	The absorption curve should be smooth.	
9	Impurity A (By GC)	Maximum 2 ppm v/v	QC/PH-FG/SPEC/09-10
10	Related substances (By GC)		QC/PH-FG/SPEC/09-10
	a) Any impurity	Not more than 0.1%	
	b) Total	Not more than 0.3%	
11	Reducing substances	The pink colour should not completely discharged within 5 min.	QC/PH-FG/SPEC/09-11
12	Residue on evaporation	Maximum 10 ppm	QC/PH-FG/SPEC/09-12
13	Water	Maximum 0.10%	QC/PH-FG/SPEC/09-13
14	Residual solvents (By GC)		QC/PH-FG/SPEC/09-14
	a) Benzene	Not more than 2ppm v/v	
	b) Ethanol	Not more than 5000ppm v/v	
	c) Acetone	Not more than 5000ppm v/v	

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	PREPARED BY	CHECKED BY	AUTHORIZED BY
	Q.C	Q.C	Q.A
SIGNATURE	<i>Q. C.</i>	<i>Q. C.</i>	<i>P. Pandit</i>
DATE	28/12/2022	28/12/2022	29/12/2022

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### GENERAL INFORMATION

**Structure:**

**Molecular Formula:** CH<sub>4</sub>O

**Molecular weight:** 32.04

**Desirable Pack:**

To be supplied in MS drums/SS containers/HDPE containers/HM-HDPE containers and Glass bottles, properly identified with a label having Name of the material, Name of the Manufacturer, Quantity, Manufacturer's Batch Number, Manufacturing Date, Expiry Date and or Retest Date.

**Storage Condition:**

In an airtight container.

**Handling precaution:**

Use PPE (Personal Protective Equipments) during handling of the material.

**Sampling SOP:**

As per the current approved sampling procedure. (SOP/QC/GEN/01)

**Quantity to be sampled:**

Analysis Sample: About 790 ml

Control Sample: About 1580 ml

Stability Sample: About 7920 ml

**Shelf Life:**

Three years from the date of manufacturing.

**Note:**
**1. For Bullet, Filter and Supporting equipment rinsing and filter cleaning-**

- If previous product is any grade of Methanol, then perform Appearance, Solubility, Identification by Refractive index at 20±0.5°C, Absorbance and Water tests as per FG specification.
- If previous product is different then perform Appearance, Solubility tests as per FG specification and calculate previous product carry over by using "Purity (By GC)" method from Raw material specification. (Limit - NMT 0.2%) QC/SPEC/METHANOL\_RM/01

**2. For Tanker Rinsing-**

- Perform Appearance, Solubility, Identification, Relative Density at 20°C, Absorbance, Impurity A (By GC), Related substances (By GC), Residue on evaporation and Water tests as per FG specification..

**3. Blending and Packing-**

- Perform all tests as per FG specification.
- Residual solvents (By GC) test perform only for packing.

**4. For Stability testing-**

- Perform Appearance, Solubility, Identification, Absorbance, Impurity A (By GC), Related substances (By GC), Residue on evaporation, Residual solvents (By GC) and Water tests as per FG specification. (Stability sample quantity- About 660 ml for single analysis).

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Document number	Supersedes	Changes made	Reason for change
QC/PH-FG/SPEC/09	Rev.0	Format change – 1. General Information added. 2. History page added. 3. Reference updated	As per requirement of Schedule M.  BP-2013
	Rev.1	Reference updated	BP-2014
	Rev.2	Reference updated Detector temperature is reduced from 280°C to 230°C. Split ratio is adjusted from 1:20 to 1:10 RUNA Logo inserted along with the name of company	BP- 2016 Refer Change Control No. RCPL/CC/QC/015-15
	Rev.3	1. Reference updated 2. For Refractive index temperature Condition is changed from 20°C to 20±0.5°C. And Mention brief procedure for Appearance of solution test	BP- 2016 Refer Change Control No. RCPL/CC/QC/015-15
	Rev.4	Reference updated	BP- 2017 Refer Change Control No. RCPL/CC/QC/010-16
	Rev.5	Reference updated	BP- 2018 Refer Change Control No. RCPL/CC/QC/006-17
	Rev.6	1. Mentioned tests to be perform for Bullet Rinsing, Filter Rinsing and Tanker Rinsing. 2. Shelf Life is added.	Refer Change Control No. RCPL/CC/QC/003-18
	Rev.7	1. Reference updated  2. Mentioned tests to be perform for Supporting equipments 3. Quantity of Stability sample is added.	BP-2019. Refer Change Control No. RCPL/CC/QC/010-18 Refer Change Control No. RCPL/CC/PDN/003-18
	Rev.8	1. GAM No. Added for Boiling Point test. 2. Test wise method of analysis (MOA) is prepared. Method of Analysis No. is added.	(Refer Change Control No. RCPL/CC/QC/002-19) (Refer Change Control No. RCPL/CC/QC/003-19)
	Rev.9	1. Reference updated. 2. In MOA No.QC/PH-FG/SPEC/09-01 a) Procedure is updated. b) "Interpretation" is added.	BP-2020 (Refer Change Control No. RCPL/CC/QC/007-19)

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QC/PH-FG/SPEC/09	Rev.9	3. In MOA No. QC/PH-FG/SPEC/09-02 a) Procedure is updated. b) "Interpretation" is added. 4. In MOA No. QC/PH-FG/SPEC/09-04 a) "Limit" is added. 5. In MOA No. QC/PH-FG/SPEC/09-05 a) Procedure is updated for spectrum range 6. In MOA No. QC/PH-FG/SPEC/09-06 a) "Interpretation" is added. 7. In MOA No. QC/PH-FG/SPEC/09-07 a) Solution preparation is updated. b) The term "sample" replaced by "substance to be examine" 8. In MOA No. QC/PH-FG/SPEC/09-08 a) The "sample" term replaced by "substance" b) "Limit" is added. 9. In MOA No. QC/PH-FG/SPEC/09-09 a) Incorporation of spectrum nature details between 230nm to 290nm. b) The term "Interpretation" replaced by "Limit" 10. In MOA No. QC/PH-FG/SPEC/09-10 a) Chromatographic condition is updated for addition of Auxiliary gas, Column flow, Makeup flow, Hydrogen flow, Air flow and Equilibration time. b) Procedure is updated for addition of "Test solution a" 11. In MOA No. QC/PH-FG/SPEC/09-11 a) Solution preparation is added. b) The term "sample" replaced by "substance to be examine" 12. In MOA No. QC/PH-FG/SPEC/09-12 a) The term "sample" replace by "substance to be examine" b) "Limit" is added. 13. In MOA No. QC/PH-FG/SPEC/09-13 a) The term "sample" replaced by "substance" b) "Limit" is added. 14. Following points are added in	

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Document number	Supersedes	Changes made	Reason for change
QC/PH-FG/SPEC/09	Rev.9	general information. a) Quantity to be sampled is modified by adding term "About" b) Mentioned tests to be perform for stability testing. c) Quantity for stability sample for single analysis is added. d) Desirable pack updated for addition of HM-DHPE containers. e) Filter cleaning is added.	
	Rev.10	1. Reference updated.	BP-2021 (Refer Change Control No. RCPL/CC/QC/001-21)
	Rev.11	1. Reference updated. 2. In MOA No. QC/PH-FG/SPEC/09-03 "It is flammable" is removed. 3. In MOA No. QC/PH-FG/SPEC/09-10 chromatographic condition is updated for addition of Injection mode, Total Flow and Pressure. Procedure is updated for injection sequence. 4. Residual solvents (By GC) test is added. Also new MOA No. QC/PH-FG/SPEC/09-14 is added. Same test is added in stability testing. 5. Quantity to be sampled and stability quantity for single analysis is updated.	BP-2022 (Refer Change Control No. RCPL/CC/QC/004-21)
	Rev.12	1. Reference updated.	BP-2023 (Refer Change Control No. RCPL/CC/QC/009-22)

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