

Laboratory SRF-CB, QA Laboratory, Village: Jhiwana, Tehsil: Tijara, District: Alwar, Rajasthan
Accreditation Standard ISO/IEC 17025: 2005
Discipline Chemical Testing **Issue Date** 02.01.2015
Certificate Number T-1359 **Valid Until** 01.01.2017
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| S.No. | Product / Material of Test | Specific Test Performed | Test Method Specification against which tests are performed | Range of Testing / Limits of Detection |
|---|--|---|---|---|
| I. INDUSTRIAL AND FINE CHEMICALS | | | | |
| 1 | R-22 (Refrigerant Gas) | Appearance Purity Moisture Acidity as HCl Chloride Particulates/solids High Boiling residue Non absorbable gases in vapour phase | QA/STP/FP/RG/01 Issue No.: 02 Issue Date: 29.04.2013 | Qualitative 98.0 % to 100.0 % 0.0005 % to 0.0025 % 0.00001 % to 0.0005 % Qualitative Qualitative 0.0005 % to 0.010 % 0.01 % to 5.0 % |
| 2. | R-22 National (Refrigerant Gas) | Appearance Purity HCFC-31 HCFC-21 HCFC-12 HCFC-32 Moisture Acidity as HCl Chloride Particulates/solids High Boiling residue Non absorbable gases in vapour phase | QA/STP/FP/RG/02 Issue No.: 02 Issue Date: 29.04.2013 | Qualitative 98.0 % to 100.0 % 0.0001 % to 0.0050 % 0.0001 % to 0.0050 % 0.0001 % to 0.10 % 0.0001 % to 0.50 % 0.0005 % to 0.0025 % 0.00001% to 0.0005 % Qualitative Qualitative 0.00050 % to 0.010 % 0.01 % to 5.0 % |
| 3. | R-134a (Refrigerant Gas) | Appearance Purity Moisture Acidity as HCl Chloride Particulates/solids High Boiling residue Non absorbable gases in vapour phase | QA/STP/FP/HFC/01 Issue No.: 02 Issue Date: 13.10.2013 | Qualitative 98.0 % to 100.0 % 0.0005 % to 0.0025 % 0.00001% to 0.0005 % Qualitative Qualitative 0.00050 % to 0.010 % 0.01 % to 5.0 % |

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| 4 | R-134a Propellant (Refrigerant Gas) | Appearance Identification Purity Individual unidentified impurity Total unidentified impurities Other identified saturated impurities Total unsaturated compounds Moisture Acidity as HCl Chloride Particulates/solids High Boiling residue Non absorbable gases in vapour phase Foreign Odour | QA/STP/FP/HFC/02 Issue No.: 02 Issue Date: 13.10.2013 | Qualitative Qualitative 98.0 % to 100.0 % 0.0001 % to 0.005 % 0.0001 % to 0.005 % 0.0001 % to 0.10 % 0.0001 % to 0.0050 % 0.0001% to 0.0025 % 0.00001% to 0.0005 % Qualitative Qualitative 0.00001% to 0.005 % 0.01 % to 5.0 % Qualitative |
| 5. | Methylene Chloride (Chloromethane) | Appearance Colour Purity Amylene Chloroform Carbon Tetrachloride Moisture Acidity as HCl Non Volatile Residue | QA/STP/FP/CMS/02 Issue No.: 02 Issue Date: 13.10.2013 | Qualitative 2.0 Hazen to 15.0 Hazen 98.0 % to 100.0 % 0.0020 % to 0.01 % 0.0002 % to 0.1000 % 0.0002 % to 0.1000 % 0.0005 % to 0.0200 % 0.0001 % to 0.01 % 0.0005 % to 0.0010 % |
| 6. | Chloroform (Chloromethane) | Appearance Colour Purity Amylene Methylene Chloride Carbon Tetrachloride Moisture | QA/STP/FP/CMS/03 Issue No.: 02 Issue Date: 13.10.2013 | Qualitative 2.0 Hazen to 15.0 Hazen 98.0 % to 100.0 % 0.0020 % to 0.01 % 0.0002 % to 0.1000 % 0.0002 % to 0.1000 % 0.0005 % to 0.0200 % |

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| | Chloroform (Chloromethane) | Acidity as HCl Non Volatile Residue | QA/STP/FP/CMS/03 Issue No.: 02 Issue Date: 13.10.2013 | 0.0001 % to 0.01 % 0.0005 % to 0.0010 % |
| 7. | Carbon Tetrachloride (Chloromethane) | Appearance Colour Purity Methylene Chloride Chloroform Moisture Acidity as HCl Non Volatile Residue | QA/STP/FP/CMS/04 Issue No.: 02 Issue Date: 13.10.2013 | Qualitative 2.0 Hazen to 15.0 Hazen 98.0 % to 100.0 % 0.0020 % to 0.01 % 0.0002 % to 0.1000 % 0.0002 % to 0.1000 % 0.0005 % to 0.0200 % 0.0001 % to 0.01 % 0.0005 % to 0.0010 % |
| 8. | Trifluoroacetic Acid (Specialty Chemicals) | Appearance Purity by titrimetry Moisture Fluoride Chloride Sulphate Identification | QA/STP/FP/P2/01 Issue No.: 02 Issue Date: 01.01.2014 | Qualitative 98.0 % to 100.0 % 0.0001 % to 0.1 % 0.0001 % to 0.02 % 0.0001 % to 0.02 % 0.0005 % to 0.02 % Qualitative |
| 9. | Pentafluorobenzoic Acid (Specialty Chemicals) | Appearance Purity by titrimetry Purity by HPLC Moisture | QA/STP/FP/P3/001 Issue No.: 02 Issue Date: 30.11.2013 | Qualitative 95.0 % to 101.0 % 95.0 % to 100.0 % 0.0005 % to 0.50 % |
| 10. | Parabromofluorobenzene (Specialty Chemicals) | Appearance Purity by GC Orthobromofluorobenzene Individual Impurity Moisture Total Acidity as HBr | QA/STP/FP/P4/01 Issue No.: 02 Issue Date: 30.11.2013 | Qualitative 98.0 % to 100.0 % 0.01 % to 1.0 % 0.01 % to 1.0 % 0.0001 % to 0.50 % 0.0001 % to 0.010 % |

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| 11. | Tetrafluorobenzyl Alcohol (Specialty Chemicals) | Appearance | QA/STP/FP/P5/01 | Qualitative |
| | | Purity by GC | Issue No.: 02 | 98.0 % to 100.0 % |
| | | Pentafluorobenzyl Alcohol by GC | Issue Date: 31.10.2013 | 0.0001 % to 0.010 % |
| | | 2, 3, 5 Trifluorobenzyl Alcohol by GC | | 0.0001 % to 0.0500 % |
| | | 2, 3, 5, 6 Tetrafluorobenzaldehyde by GC | | 0.0001 % to 0.0500 % |
| 12. | Ethyl Trifluoroacetate (Specialty Chemicals) | Methyl 2, 3, 5, 6 Tetrafluorobenzaldehyde by GC | | 0.0001 % to 0.0500 % |
| | | 2, 3, 5, 6 Tetrafluorobenzaldehyde Dimethyl Acetal by GC | | 0.0001 % to 0.0500 % |
| | | Appearance | QA/STP/FP/P7/001 | Qualitative |
| | | Identification Test (IR) | Issue No.: 02 | Qualitative |
| 13. | Methylchloro-difluoroacetate (Specialty Chemicals) | Trifluoroacetic Acid | Issue Date: 01.04.2014 | 0.01 % to 5.0 % |
| | | Individual Organic Impurity (excluding ethyl acetate & Ethanol) | | 0.01 % to 0.5 % |
| | | Total Impurities | | 0.01% to 2.0 % |
| 13. | Methylchloro-difluoroacetate (Specialty Chemicals) | Purity by GC | | 95.0 % to 100.0 % |
| | | Moisture | QA/STP/FP/MCDFA/01 | Qualitative |
| | | Fluoride | Issue No.: 02 | 95.0 % to 100.0 % |
| | | Chloride | Issue Date: 01.04.2014 | 0.0001% to 0.5 % |
| | | | | 0.0001 % to 0.02 % |

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| 14. | Ethyl Difluoroacetate (Specialty Chemicals) | Appearance | QA/STP/FP/EDFA/001 Issue No.: 02 Issue Date: 30.04.2013 | Qualitative |
| | | Identification by GC | | Qualitative |
| | | Difluoro-acetic acid ethylester | | 95.0 % to 100.0 % |
| | | Individual organic byproduct(s) | | 0.001 % to 0.50 % |
| | | Methyl difluoroacetate (MDFA) | | 0.001 % to 0.30 % |
| | | Proryl difluoroacetate | | 0.01 % to 0.30 % |
| | | Individual organic byproduct(s) exceeding 0.1 % Moisture | | 0.0001% to 0.50 % |
| 15. | Aminocrotonate (Specialty Chemicals) | Sulphuric acid content | QA/STP/FP/P9/001 Issue No.: 02 Issue Date: 30.04.2013 | 0.0001% to 0.50 % |
| | | Hydrofluoric acid content | | 0.0001% to 0.10 % |
| | | Aminocrotonate (Ethyl 3-amino-4,4,4-trifluorocrotonate) | | 95.0 % to 100.0 % |
| | | Methyl 3-amino-4,4,4-trifluorocrotonate | | 0 to 2.0 % |
| | | Ethyl trifluoroacetoacetate (Butanoic acid 4,4,4-trifluoro-3-oxo-ethylester) | | 0 to 2.0 % |
| | | Further byproduct(s) (each)/Single individual impurity | | 0 to 2.0 % |
| Moisture | 0.0001 % to 0.5 % | | | |

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| 16. | Potassium Fluoride (Specialty Chemicals) | Appearance Assay as KF Moisture Content Alkalinity as KOH Chloride as KCl Sulphate as K ₂ SO ₄ Iron as Fe (Visual limit test) Heavy Metal as Pb (Visual limit test) Potassium Fluoro silicate | QA/STP/FP/P10/01 Issue No.: 02 Issue Date: 14.07.2014 | Qualitative 95.0 % to 100.0 % 0.0001 % to 1.0 % 0.0001 % to 1.0 % 0.0001% to 0.5 % 0.0001 % to 0.5 % 0.0001 % to 0.05 % 0.0005 % to 0.005 % 0.0001 % to 0.5 % |

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