National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	VERTOX LABORATORY, DEFENCE R&D ESTABLISHMENT, JHANSI ROAD, GWALIOR, MADHYA PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5790	**Page No**	1 of 8
Validity	31/01/2023 to 30/01/2025	**Last Amended on**	-

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	CHEMICAL- WARFARE CHEMICALS	Biomedical Samples (Urine and Plasma)	Qualitative analysis for the presence or absence of Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 1. O-Alkyl(C1 to C10 including cycloalkyl) alkyl(Me, Et, n-Pr or i-Pr)Phosphonofluoridates 2. O-Alkyl(C1 to C10 including cycloalkyl) N,N-dialkyl(Me, Et, n-Pr or i-Pr)Phosphoramidocyanidate Metabolites and adducts of these chemicals which can be linked to them by holding the basic skeleton or by literature	ROP/2017 ISBN 978-951-51-3917-7
2	CHEMICAL- WARFARE CHEMICALS	Biomedical Samples (Urine and Plasma)	Qualitative analysis for the presence or absence of Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 5. Lewisites : 2-Chlorovinyl dichloroarsine, Bis(2-chlorovinyl) chloroarsine, & Tris(2-chlorovinyl)arsine 6. Nitrogen mustards: Bis(2-chloroethyl)ethylamine, Bis(chloroethyl)methylamine, & Tris(2-chloroethyl)amine 7. Alkyl(Me, Et, n-Pr or i-Pr) phosphonyldifluoides Metabolites and adducts of these chemicals which can be linked to them by holding the basic skeleton or by literat	ROP/2017 ISBN 978-951-51-3917-7

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3	CHEMICAL- WARFARE CHEMICALS	Biomedical Samples (Urine and Plasma)	Qualitative analysis for the presence or absence of Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 8. O-Alkyl(H or C1 to C10 including cycloalkyl) O-2-dialkyl(Me, Et, n-Pr or i-Pr)aminoethyl alkyl(Me, Et, n-Pr or i-Pr) Phosphonites corresponding protonated or alkylated salts 9. Chlorosarin 10. Chlorosoman Metabolites and adducts of these chemicals which can be linked to them by holding the basic skeleton or by literature	ROP/2017 ISBN 978-951-51-3917-7
4	CHEMICAL- WARFARE CHEMICALS	Biomedical Samples (Urine and Plasma)	Qualitative analysis for the presence or absence of Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 3. O-Alkyl(C1 to C10 including cycloalkyl) S-2-dialkyl(Me, Et, n-Pr or i-Pr) aminoethylalkyl(Me, Et, n-Pr or i-Pr) Phosphonothiolates and corresponding protonated or alkylated salts; 11. Alkyl(Me, Et, n-Pr or i-Pr)phosphonyldifluoides Metabolites and adducts of these chemicals which can be linked to them by holding the basic skeleton or by literature	ROP/2017 ISBN 978-951-51-3917-7

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5	CHEMICAL- WARFARE CHEMICALS	Biomedical Samples (Urine and Plasma)	Qualitative analysis for the presence or absence of Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 4. Sulphur mustards : 2-Chloroethyl chloromethyl sulphide, Bis(2-chloroethyl)sulphide, Bis(2-chloroethylthio)methane, 1,2-Bis(2-chloroethylthio)ethane, 1,3-Bis(2-chloroethylthio)-n-propane, 1.4-Bis(2-chloroethylthio)-n-butane, 1,5-Bis(2-chloroethylthio)-n-pentane, Bis(2-chloroethylthiomethyl) ether, & Bis(2-chloroethylthioethyl) ether Metabolites and adducts of these chemicals	ROP/2017 ISBN 978-951-51-3917-7
6	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 1. O-Alkyl(C1 to C10 including cycloalkyl) alkyl(Me, Et, n-Pr or i-Pr)Phosphonofluoridates 2. O-Alkyl(C1 to C10 including cycloalkyl) N,N-dialkyl(Me, Et, n-Pr or i-Pr)Phosphoramidocyanidate Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton	ROP/2017 ISBN 978-951-51-3917-7

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7	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of Chemical Weapons Convention related Schedule 1 chemicals: 4. Sulphur mustards : 2-Chloroethyl chloromethyl sulphide, Bis(2-chloroethyl)sulphide, Bis(2-chloroethylthio)methane, 1,2-Bis(2-chloroethylthio)ethane, 1,3-Bis(2-chloroethylthio)-n-propane, 1.4-Bis(2-chloroethylthio)-n-butane, 1,5-Bis(2-chloroethylthio)-n-pentane, Bis(2-chloroethylthiomethyl) ether, & Bis(2-chloroethylthioethyl) ether Degradation / reaction products of these chemicals	ROP/2017 ISBN 978-951-51-3917-7
8	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 3. O-Alkyl(C1 to C10 including cycloalkyl) S-2-dialkyl(Me, Et, n-Pr or i-Pr) aminoethylalkyl(Me, Et, n-Pr or i-Pr) Phosphonothiolates and corresponding protonated or alkylated salts. Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton.	ROP/2017 ISBN 978-951-51-3917-7

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9	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 5. Lewisites : 2-Chlorovinyl dichloroarsine, Bis(2-chlorovinyl) chloroarsine, & Tris(2-chlorovinyl)arsine 6. Nitrogen mustards: Bis(2-chloroethyl)ethylamine, Bis(chloroethyl)methylamine, & Tris(2-chloroethyl)amine 7. Alkyl(Me, Et, n-Pr or i-Pr)phosphonyldifluoides Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic ske	ROP/2017 ISBN 978-951-51-3917-7
10	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 1 chemicals: 8. O-Alkyl(H or C1 to C10 including cycloalkyl) O-2-dialkyl(Me, Et, n-Pr or i-Pr)aminoethyl alkyl(Me, Et, n-Pr or i-Pr) Phosphonites corresponding protonated or alkylated salts 9. Chlorosarin 10. Chlorosoman Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton.	ROP/2017 ISBN 978-951-51-3917-7

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11	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 2 chemicals: 1. O,O-Diethyl-S-[2-(diethylamino)ethyl] phosphorothiolate (Amiton) corresponding protonated or alkylated salts 2. 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (PFIB) 3. 3-Quinuclidinyl benzilate (BZ) Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton.	ROP/2017 ISBN 978-951-51-3917-7
12	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 2 chemicals: 12. N,N-Dialkyl(Me, Et, n-Pr or i-Pr)aminoethane-2-thiols corresponding protonated salts 13. Thiodiglycol 14. Pinacolyl alcohol Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton.	ROP/2017 ISBN 978-951-51-3917-7
13	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 2 chemicals: 4. Organophsophorus chemicals having P-C(Me, Et, n-Pr or i-Pr) group 5. N,N-Dialkyl(Me, Et, n-Pr or i-Pr)phosphoramidicdihalides 6. Dialkyl(Me, Et, n-Pr or i-Pr)N,N-dialkyl(Me, Et, n-Pr or i-Pr)phosphoramidates 7. Arsenic trichloride Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton.	ROP/2017 ISBN 978-951-51-3917-7

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14	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 2 chemicals: 8. 2,2-Diphenyl-2-hydroxyacetic acid 9. Quinuclidine-3-ol 10. N,N-Dialkyl(Me, Et, n-Pr or i-Pr)aminoethyl-2-chlorides corresponding protonated salts 11. N,N-Dialkyl(Me, Et, n-Pr or i-Pr)aminoethane-2-ols corresponding protonated salts. Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton.	ROP/2017 ISBN 978-951-51-3917-7
15	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 3 chemicals: 1. Phosgene 2. Cyanogen chloride 3. Hydrogen cyanide 4. Trichloronitromethane (Chloropicrin) 5. Phosphorus oxychloride 6. Phosphorus trichloride 7. Phosphorus pentachloride Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton.	ROP/2017 ISBN 978-951-51-3917-7

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16	CHEMICAL- WARFARE CHEMICALS	Environmental Samples (Soil, Water/aqueous, Organic Liquid, Polymer, Wipe)	Qualitative analysis for the presence or absence of the Chemical Weapons Convention (CWC) related Schedule 3 chemicals: 8. Trimethyl phosphite 9. Triethyl phosphite 10. Dimethyl phosphite 11. Diethyl phosphite 12. Sulphur monochloride 13. Sulphur dichloride 14. Thionyl chloride 15. Ethyldiethanolamine 16. Methyldiethanolamine 17. Triethanolamine Degradation / reaction products of these chemicals which can be linked to their precursors by holding the basic skeleton.	ROP/2017 ISBN 978-951-51-3917-7