

Laboratory	Forensic Science Laboratory, HAP Campus, Madhuban, Haryana		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Forensic Testing	Issue Date	24.04.2015
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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.	BALLISTICS			
1.	Firearms/ Parts thereof	Serviceability of firearms and physical characteristics matching	FSL-HRY-BALL Manual Issue No. 01 dated 22.03.2004	
		Measurement of physical parameters (dimension)		0.01 mm to 200 mm
		Test for accidental discharge		
		Conducting test firing and simulation by considering different aspects of possibilities of accidental discharge		Qualitative
		Barrel wash for detection of discharge residues		
		Color/chemicals tests		Qualitative
2.	Cartridge/ Cartridge Case/ Parts thereof	Identification of cartridge/cartridge cases	FSL-HRY-BALL Manual Issue No. 01 dated 22.03.2004	
		Measurement of physical parameters (dimension)		0.01 mm to 200 mm
		Characteristics matching using stereo and comparison microscope		Qualitative (Comparison)
		In consultation with literature		Qualitative

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3.	Bullets/ Pellets/ Parts Thereof	Caliber of bullet/size of pellet	FSL-HRY-BALL Manual Issue No. 01 dated 22.03.2004	
		Measurement of physical parameters (dimensions)		0.01 mm to 200 mm
		Physical characteristics matching of projectiles		Qualitative
		Class and individual characteristics of rifling/striations marks on projectiles		
		Examination of land and grooves/striations under stereo and comparison microscope		Qualitative
4.	Wads/ Parts thereof	Bore/type of wad	FSL-HRY-BALL Manual Issue No. 01 dated 22.03.2004	
		Measurement of physical parameters (dimensions)		Qualitative
		In consultation with literature available		Qualitative
5.	Cloth/Targets/ Parts Thereof	Examination of holes/tears on clothes and targets	FSL-HRY-BALL Manual Issue No. 01 dated 22.03.2004	
		Measurement of physical parameters (dimensions)		0.01 mm to 200 mm
		Examination under high power lens and stereo microscope		Qualitative

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	Cloth/Targets/ Parts Thereof	Examination and analysis of gun shot discharge residues Examination under stereo microscope		Qualitative
		Colour/Chemical tests		Qualitative
		Determination of range, direction & angle of firing Examination Under Stereo Microscope		Qualitative
		Comparison with the standard pattern available in literature		Qualitative
		By simulated experimentation		Qualitative
II.	BIOLOGY			
A.	Detection of Body Fluid Stains			
1.	Blood	Chemical color test	FSL-HRY-BIO (Chapter-1)	Qualitative
2.	Semen	Acid phosphate enzyme test sperm identification in semen	FSL-HRY-BIO (Chapter-1)	Qualitative
3.	Saliva	Presence of a- amylase in saliva starch iodine test	FSL-HRY-BIO (Chapter-1)	Qualitative
4.	Hair	Identification of human hair species harphology & microscopy	FSL-HRY-BIO (Chapter-1)	Qualitative

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5.	Diatoms	Identification of diatoms comparison microscopy	FSL-HRY-BIO (Chapter-1)	Qualitative
B. ANATOMICAL & MORPHOLOGICAL EXAMINATION OF BIOLOGICAL EXHIBITS				
1.	Hair	Identification of human hair species morphology and microscopy	FSL-HRY-BIO (Chapter-11)	Qualitative Minimum 10 strands of hair
2.	Fibers	Vegetable fibers comparison morphology, microscopy & chemical test	FSL-HRY-BIO (Chapter-8)	Qualitative
3.	Partially burnt bones/ skeletal remains	Species of origin sex and age determination identification of skull morphological & anatomical features	FSL-HRY-BIO (Chapter-6)	Qualitative
4.	Diatoms	Identification of diatoms & microscopy	FSL-HRY-BIO (Chapter-15)	Qualitative 10ml blood sample
5.	Maggots	Identification morphology & microscopy	FSL-HRY-BIO (Chapter-9)	Qualitative
III. PSYCHOLOGY				
1.	Suspects, witnesses, complainants for veracity of their statements	Pneumograph Sphygmograph Galvanograph Mixed General Questionnaire Technique (MGQT)	FSL/HRY/Lie-det.	Minimum 3 administration of test questionnaire (s) on the subject

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IV.	PHYSICS			
A.	MATERIALS			
1.	Cement	Physical test Bromoform test Fineness test Loss on ignition gravimetric test (analysis of chemical constituents i.e. insoluble residue, silica and lime) Breaking force for calculating the compressive strength	FSL/HRY/PHY ISI Bulletin Vol 29 No 7 Page 233-242(1997) IS 4031 (Part1): 1996 IS 4031(Part 9): 2000 IS 4032: 1990 IS 1199 : 1989 IS 4031(Part 6): 2000	Qualitative 0.2 % 1 g to 5 g 1 kg/cm ²
2.	Mortar/Plaster	Chemical treatment to find the ratio of cement and sand	FSL/HRY/PHY IS 1199: 1989	0.2 % 1g to 5 g
3.	Concrete	Chemical treatment to find the ratio of cement sand and stone	FSL/HRY/PHY IS 1199-1989	0.2 % 1 g to 5 g
4.	Sand	Fineness test, particle size by sieve testing	FSL/HRY/PHY	Qualitative
5.	Bricks	Compressive strength test, water absorption efflorescence test physical test	FSL/HRY/PHY	1 kg/cm ² Qualitative
6.	Road Material	Chemical treatment with benzene and separation by bitumen extractor machine (centrifugal machine)	FSL/HRY/PHY	0.2 %

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7.	Tool Marks And Cut Marks	Physical measurement measurement of cut / tool marks photography microscopy test comparison with trial marks caused by weapon of offence / tool	FSL/HRY/PHY	Qualitative
8.	Identification Marks	Physical examination and chemical reaction photography Physical observation Chemical treatment to decipher the erased mark	FSL/HRY/PHY	Qualitative
9.	Broken Objects	Physical matching Microscopy test Photography for physical fitting	FSL/HRY/PHY	Qualitative
10.	Metals	Physical appearance Microscopic appearance UV fluorescence Qualitative examination energy dispersive x-ray spectrometer	FSL/HRY/PHY	Qualitative
11.	Glass Fragments	Physical measurement Microscopic appearance density Refractive index Glass fracture examination Elemental analysis by Emission Spectrograph	FSL/HRY/PHY	Qualitative 0.01 mm to 200 mm 0.001 gm/cc 0.0001

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12.	Soil	Physical appearance Microscopic appearance Ignition test Particle size by sieve test Density gradient examination	FSL/HRY/PHY	Qualitative
B. EXAMINATION OF TEMPERED ELECTRIC POWER METERS				
1.	Meter Seal Broken	Physical examination microscopic/magnifying glass	FSL/HRY/PHY	Qualitative
2.	Meter Seal Wires Broken	Physical examination microscopic/ magnifying glass	FSL/HRY/PHY	Qualitative
3.	Fake/ Tampered Meter Seals	Comparison with control sample using optical microscope	FSL/HRY/PHY	Qualitative
4.	Replacement of Meter Front Glass	Physical examination examination of rubber glass packing broken glass chips Presence of Adhesive	FSL/HRY/PHY	Qualitative
5.	Electric Short Circuiting inside Meter/ Outside Fire	Physical examination beads formation insulation of wire	FSL/HRY/PHY	Qualitative

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C. EXAMINATION OF ELECTRIC CABLES/ WIRES				
1.	Cables & Wires	Physical measurement and comparison Number of strands Diameter of strands Dye marks Twist Colour	FSL/HRY/PHY	Qualitative
2.	Electric Cables/ Wires	Physical measurement Qualitative analysis Elemental analysis by Emission Spectrograph	FSL/HRY/PHY	0.01 mm to 200 mm
V. FORENSIC ELECTRONIC INVESTIGATION				
1.	Audio/ Video Cassette/ CD Audio Printed leaflet/ Printed matter Trade mark/ Logo Manufacture Type Colour Data and Files	Comparison on Cassette Player, VCR, CD-Player and CD-Rom Physical comparison Microscopic examination Analysis on CD-Rom of the computer	FSL/HRY/PHY	Qualitative
VI. CRIME SCENE INVESTIGATION				
1.	Comparison of Foot Prints/ Shoe Prints/ Tyre Marks	Physical Parameters	FSL/HRY/PHY	Qualitative

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VII SEROLOGY				
1.	Blood/Blood Stains	Benzidene Test	FSL(H)/Sero Issue no. 1 dated -22.05.14 Test-3.1	Qualitative (Blood Dilution of 1:1000 000 gives positive reaction)
2.	Determination of Origin of Species	Antigen-Antibody Precipitation of Origin of Blood	FSL(H)/Sero Issue no. 1 dated -22.05.14 Test-3.2	Qualitative 3µg/ml
3.	Determination of Blood Group	ABO Blood Grouping by Absorption and Elution Technique Double Immune Diffusion (OUCHTERLONY) Method	FSL(H)/Sero Issue no. 1 dated -22.05.14 Test-3.3	Qualitative 0.003 µg/ml
VIII NARCOTICS				
1.	Identification and Estimation of banned drugs under N.D.P.S. Act 1985	Color Test Marquis Test Ferric Salt Test Porphyroxine T.L.C.and GC	FSL/HRY/NDPS Issue No. 1, dated:22.03.2004 Test-3.5.1a Test-3.5.1b Test-3.5.1c	1 µg/µl 0.5 µg/µl 0.2 µg/µl
	Opium	GCMS	Test-3.5.2	0.2 µg/µl
	Poppy Straw	UV-VIS	Test-3.5.5	(0.5 mg to 16mg)
	Codeine		Test-3.5.3	/100mg
	Thebaine			
	Morphine Heroin (DAM)	Color Test Marquis Test Mecke Test Frohde's Test TLC and GC GCMS UV-VIS Spectroscopy	FSL/HRY/NDPS Issue No. 1, Dated: 22.03.2004 Test-4.5.1a Test-4.5.1b Test-4.5.1c Test-4.5.2 Test-4.5.5 Test-4.5.3	1 µg/µl 0.5 µg/µl 0.2 µg/µl (0.5 mg to 16mg)/ 100mg

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2.	Phenobarbital	Color Test Dille-Koppanyi T.L.C.and GC GCMS	FSL/HRY/NDPS Test-9.5.1 Test-9.5.2 Test-9.5.4	1 µg/µl 0.5 µg/µl 0.2 µg/µl
3.	Methaqualone	Color Test Cobalt Thiocynate Test Fischer-Morris Test TLC and GC GCMS	FSL/HRY/NDPS Test-7.5.1a Test-7.5.1b Test-7.5.2 Test-7.5.4	1 µg/µl 1 µg/µl 0.5 µg/µl 0.2 µg/µl
4.	Benzodiazepines Alprazolam Diazepam Nitrazepam Clonazepam Medazepam Chlordiazepoxide	T.L.C.and GC GCMS U.V.	FSL/HRY/NDPS Test-10.5.2 Test-10.5.4 Test-10.5.5	0.5 µg/µl 0.2 µg/µl 0.25 µg/µl
5.	Amphetamine Metha- Amphetamines	Color Test Marquis Test TLC. GCMS	FSL/HRY/NDPS Test-8.5.1 Test-8.5.2 Test-8.5.3	1 µg/µl 0.5 µg/µl 0.2 µg/µl
6.	Pentazocine	T.L.C. GCMS U.V	FSL/HRY/NDPS Test-10.5.2 Test-10.5.4 Test-10.5.5	0.5 µg/µl 0.2 µg/µl 0.5 µg/µl

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7.	Ganja Charas	Microscopic Examination Color Test Fast Blue B Salt Test(Filter Paper Test) Duquenois- Levin Test P-Aminophenol TLC- Spray Reagent Fast Blue B	FSL/HRY/NDPS Test-5.5.1 Test-5.5.2a Test-5.5.2b Test-5.5.2c Test-5.5.3	 1 µg/µl 1 µg/µl 1 µg/µl 1 µg/µl 0.5 µg/µl
8.	Propoxyphine Dextropropoxyphine	T.L.C. GCMS	FSL/HRY/ND Test-3.5.2 Test-3.5.5	 0.5 µg/µl 0.2 µg/µl
IX.	DNA			
1.	Blood	DNA Extraction Quantitation Quality Check Purification PCR Amplification STR Analysis	FSL-HRY-DNA Issue No. 01 Issue date : 27.12.2007 Test/Method/method: 1.3 Test/Method: 1.3.1.4 Test/Method: 1.3.1.5 Test/Method: 1.3.2.1 Test/Method: 1.3.2.5 Test/Method: 1.3.3.1 Test/Method: 1.3.3.2 Test/Method: 1.3.3.4 Test/Method: 1.3.4 Test/Method: 1.3.4.4 Test/Method: 1.3.5.4 Test/Method: 1.3.6.4	Qualitative ROT: 2 ng/µl to 3700 ng/µl Qualitative Qualitative Qualitative Qualitative

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2.	Blood Stain	DNA Extraction	FSL-HRY-DNA Issue No. 01 Issue date : 27.12.2007 Test/Method/method: 2.3 Test/Method: 2.3.1.4 Test/Method: 2.3.1.5	Qualitative
		Quantitation	Test/Method: 1.3.2.1 Test/Method: 1.3.2.5	ROT: 2 ng/μl to 3700 ng/μl
		Quality Check	Test/Method: 1.3.3.1 Test/Method: 1.3.3.2 Test/Method: 1.3.3.4	Qualitative
		Purification	Test/Method: 1.3.4 Test/Method: 1.3.4.4	Qualitative
		PCR Amplification	Test/Method: 1.3.5.4	Qualitative
		STR Analysis	Test/Method: 1.3.6.4	Qualitative
3.	Semen/Seminal Stains/Vaginal swab	DNA Extraction	FSL-HRY-DNA Issue No. 01 Issue date : 27.12.2007 Test/Method/method: 3.3 Test/Method: 3.3.1.4 Test/Method: 3.3.1.5	Qualitative
		Quantitation	Test/Method: 1.3.2.1 Test/Method: 1.3.2.5	ROT: 2 ng/μl to 3700 ng/μl
		Quality Check	Test/Method: 1.3.3.1 Test/Method: 1.3.3.2 Test/Method: 1.3.3.4	Qualitative

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	Semen/Seminal Stains/Vaginal swab	Purification	Test/Method: 1.3.4 Test/Method: 1.3.4.4	Qualitative
		PCR Amplification	Test/Method: 1.3.5.4	Qualitative
		STR Analysis	Test/Method: 1.3.6.4	Qualitative
4.	Bone/Bone Marrow		FSL-HRY-DNA Issue No. 01 Issue date : 27.12.2007	
		DNA Extraction	Test/Method/method: 4.3 Test/Method: 4.3.1.4 Test/Method: 4.3.1.5	Qualitative
		Quantitation	Test/Method: 1.3.2.1 Test/Method: 1.3.2.5	ROT: 2 ng/μl to 3700 ng/μl
		Quality Check	Test/Method: 1.3.3.1 Test/Method: 1.3.3.2 Test/Method: 1.3.3.4	Qualitative
		Purification	Test/Method: 1.3.4 Test/Method: 1.3.4.4	Qualitative
		PCR Amplification	Test/Method: 1.3.5.4	Qualitative
		STR Analysis	Test/Method: 1.3.6.4	Qualitative
5.	Teeth		FSL-HRY-DNA Issue No. 01 Issue date : 27.12.2007	
		DNA Extraction	Test/Method/method: 5.3 Test/Method: 5.3.1.4 Test/Method: 5.3.1.5	Qualitative

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	Teeth	Quantitation	Test/Method: 1.3.2.1 Test/Method: 1.3.2.5	ROT: 2 ng/μl to 3700 ng/μl
		Quality Check	Test/Method: 1.3.3.1 Test/Method: 1.3.3.2 Test/Method: 1.3.3.4	Qualitative
		Purification	Test/Method: 1.3.4 Test/Method: 1.3.4.4	Qualitative
		PCR Amplification	Test/Method: 1.3.5.4	Qualitative
		STR Analysis	Test/Method: 1.3.6.4	Qualitative
6.	Hair With Root		FSL-HRY-DNA Issue No. 01 Issue date : 27.12.2007	
		DNA Extraction	Test/Method/method: 6.3 Test/Method: 6.3.1.4 Test/Method: 6.3.1.5	Qualitative
		Quantitation	Test/Method: 1.3.2.1 Test/Method: 1.3.2.5	ROT: 2 ng/μl to 3700 ng/μl
		Quality Check	Test/Method: 1.3.3.1 Test/Method: 1.3.3.2 Test/Method: 1.3.3.4	Qualitative
		Purification	Test/Method: 1.3.4 Test/Method: 1.3.4.4	Qualitative
		PCR Amplification	Test/Method: 1.3.5.4	Qualitative
		STR Analysis	Test/Method: 1.3.6.4	Qualitative

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7.	Amniotic Fluid	DNA Extraction	FSL-HRY-DNA Issue No. 01 Issue date : 27.12.2007 Test/Method/method: 7.3 Test/Method: 7.3.1.4 Test/Method: 7.3.1.5	Qualitative
		Quantitation	Test/Method: 1.3.2.1 Test/Method: 1.3.2.5	ROT: 2 ng/µl to 3700 ng/µl
		Quality Check	Test/Method: 1.3.3.1 Test/Method: 1.3.3.2 Test/Method: 1.3.3.4	Qualitative
		Purification	Test/Method: 1.3.4 Test/Method: 1.3.4.4	Qualitative
		PCR Amplification	Test/Method: 1.3.5.4	Qualitative
		STR Analysis	Test/Method: 1.3.6.4	Qualitative
8.	Body Tissues/Foetal Tissues	DNA Extraction	FSL-HRY-DNA Issue No. 01 Issue date : 27.12.2007 Test/Method/method;8.3 Test/Method: 8.3.1.4 Test/Method: 8.3.1.5	Qualitative
		Quantitation	Test/Method: 1.3.2.1 Test/Method: 1.3.2.5	ROT: 2 ng/µl to 3700 ng/µl
		Quality Check	Test/Method: 1.3.3.1 Test/Method: 1.3.3.2 Test/Method: 1.3.3.4	Qualitative

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	Body Tissues/Foetal Tissues	Purification	Test/Method: 1.3.4 Test/Method: 1.3.4.4	Qualitative
		PCR Amplification	Test/Method: 1.3.5.4	Qualitative
		STR Analysis	Test/Method: 1.3.6.4	Qualitative
X	DOCUMENTS			
1.	Hand writing/ Signatures Identification Detection of forgery	Individual Writing Characteristics Hand Magnifier Stereo Microscopy Photography	FSL/HR/DOC ASTM E 2290	Qualitative (analysis, interpretation, collation and formation of opinion on the available material)
2.	Examination of alteration in documents I.E. addition, substitution, obliteration, interpolation, overwriting, erasures etc. and their decipherment	Ink Examination, Writing Characteristics Hand Magnifier Stereo Microscopy Photography in different light sources Spectroscopy (VSC-2000/HR)	FSL/HR/DOC ASTM E 1789 ASTM E 1422 ASTM E 3321	Qualitative (analysis, interpretation, collation and formation of opinion on the available material)
3.	Examination of typewriting, printed matter, computer printouts, xerox copies, identification	Printing Defects Hand Magnifier Stereo Microscopy Photography in different light sources Spectroscopy (Documenter Expert)	FSL/HR/DOC	Qualitative (analysis, interpretation, collation and formation of opinion on the available material)

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4.	Examination of lottery ticket	Security Printing Hand Magnifier Stereo Microscopy Photography in different light sources Spectroscopy (Documenter Expert)	FSL/HR/DOC	Qualitative (analysis, interpretation, collation and formation of opinion on the available material)
5.	Examination of counterfeit currency	Security Features Hand Magnifier Stereo Microscopy Photography in different light sources Spectroscopy (Documenter Expert)	FSL/HR/DOC	Qualitative (analysis, interpretation, collation and formation of opinion on the available material)
6.	Comparison of paper including stamp paper/ stamps & other security/ legal papers	Physical Examination color, size, weight Fluorescence UV Water mark Fiber direction Printing defects Stereo microscopy UV light Transmitted light Spectroscopy (Documenter Expert)	FSL/HR/DOC ASTM E 2288	Qualitative (analysis, interpretation, collation and formation of opinion on the available material)
7.	Determination of age of document	Relative age Water mark Chronological variation in Writing/ signature Other related marks on the paper Stereo microscopy Spectroscopy	FSL/HR/DOC	Qualitative (analysis, interpretation, collation and formation of opinion on the available material)

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8.	Examination of stamp impressions and seal comparison	Physical Examination Color, size Fluorescence UV Stereo Microscopy Photography in different light sources Spectroscopy (Documenter Expert)	FSL/HR/DOC ASTM E 2289 ASTM E 2286	Qualitative (analysis, interpretation, collation and formation of opinion on the available material)
XI	CHEMISTRY			
1.	Stupefying Agents Quinine Caffeine Diazepam Nitrazepam Pentazocine Methaqualone Lorazepam Alprazolam	Marquis Test T.L.C Analysis GC-MS	FSL-HRY-CHEM-2	1 µg/µl 0.5 µg/µl 0.2 µg/µl
2.	Dyes Phenolphthlein in Samples of Trap/Bribery Cases	pH Acid –Base Reactions Test for Na⁺ Flame Test Zinc Uranyl Acetate Test Test for CO₃⁻² Effervescence Test Lime Water Test TLC Analysis Visible Spectrophotometry	FSL/HR/CHEM-I	1 to 14 (pH) 1 µg/µl 1 µg/µl 1 µg/µl 1 µg/µl 1 µg/µl 0.03 µg/µl 0.5 µg/µl
3.	Alcohol in blood and urine	Ethyl alcohol detection (by Cavett method)	FSL/HR/CHEM-2	5.75 mg to 517.5 mg

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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
4.	Petroleum Products Gasoline Kerosene HSD Lubricating Oil	Distillation Density Viscosity GC	FSL/HR/CHEM-I	100 ml 25 ml 50 ml 0.1µl
5.	Inflammable Substances In Arson Cases Gasolinekerosene Oil HSD	Gas Chromatography Technique	FSL/HR/CHEM-I	0.1 µl
6.	Corrosive Acids and Bases HCL H₂SO₄ HNO₃ NaOH KOH	Litmus Test pH Barium Chloride Test Ferrous Sulphate Test Griess Reagent Test Zinc Uranyl Acetate Test Sodium Cobalt Nitrite Test	FSL/HR/CHEM-I	Qualitative 1 to 14 1 µg/µl 1 µg/µl 1 µg/µl 1 µg/µl 1 µg/µl
7.	Nicotine in Tobacco Products	G.C-M.S GC	FSL/HRY/Chem-I	0.1 µg/µl 0.1 µg/µl
XII	Toxicology			
A	Biological Samples: Viscera, Vomit, Blood, Urine, Sweat, Vitreous Humor, Bones, Nails, Hair			
B	Non Biological Samples			
1.	Volatile Poisons- Chloroform Formaldehyde Chlorhydrate Cyanides Ethyl Alcohol Methyl Alcohol Camphor Carbondisulphide	Chemical Colour Test TLC Analysis GC Analysis GC-MS	FSL/HR/CHEM-II	Qualitative 1 µg/µl 0.5 µg/µl 0.2 µg/µl

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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		
2.	Pesticides, insecticides, Herbicides & Rodenticides-ALP ZNP	Chemical Tests:	FSL/HR/CHEM-II	0.15 µg/µl		
		Alizarin Test		0.15 µg/µl		
		Mercuric Bromide Test		0.15 µg/µl		
		Silver Nitrate Test		0.15 µg/µl		
		Dithizone Test		0.2 µg/µl		
	Organophosphorous Compounds- Melathion Parathion DDVP Dimethaote Fenvalerate Monocroto -Phos Chloropyri -Phos	TLC Analysis	FSL/HR/CHEM-II	0.5 µg/µl		
		GCMS		0.2 µg/µl		
		Organochlorinated Compounds- BHC DDT Chloropyri -Phos Endosulfan		TLC Analysis	FSL/HR/CHEM-II	0.5 µg/µl
				GCMS		0.2 µg/µl
				Pyrethroid: Deltamethrin Cypermethrin Allethrin		TLC Analysis
GCMS	0.2 µg/µl					
3.	Acidic Drug Phenobarbitone Basic Drugs Diazepam Opium Morphine Heroin Nitrazepam Methaqualone Lorazepam Alprazolam Mandrax	Marqui's Test	FSL/HR/CHEM-II	1 µg/µl		
		Mandeline's Test		1 µg/µl		
		GC-MS		0.5 µg/µl		

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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
4.	Metal Poison Arsenic Mercury Antimony Copper	Reinsch's Test Ammonium Hydroxide Test	FSL/HR/CHEM-II	Qualitative 1 µg/µl 1 µg/µl
5.	Plant Poison Kaner Cannabis Atropa-Belladona Datura Nicotine Abrus Precatorius Crotontiglium Castor Oil	Identification of Plant Poison Color Test TLC GC-MS	FSL/HR/CHEM-II	Qualitative 1 µg/µl 0.5 µg/µl 0.2 µg/µl
6.	Corrosive Chemicals in Biological Samples HCl H₂SO₄ HNO₃ NaOH KOH	Litmus Test pH Barium Chloride Test Ferrous Sulphate Test Griess Reagent Test Zinc Uranyl Acetate Test Sodium Cobaltinitrite Test	FSL/HR/CHEM-I	Qualitative 1 to 14 1 µg/µl 1 µg/µl 1 µg/µl 1 µg/µl 1 µg/µl
XIII	EXPLOSIVES			
1.	Low Explosive Anions Cl⁻ SO₃⁻² NO₂⁻ NO₃⁻ SCN⁻ ClO₃⁻ ClO₄⁻ SO₂⁻² PO₄⁻³	Silver Nitrate Test Barium Chloride Test for Nitrite Griess Reagent Test Griess Reagent Test + Zinc Test Copper Sulphate Test Magnanous Sulphate Phosphoric Acid Test Zinc Sulphate + Potassium Nitrate Test	FSL/HR/CHEM-III	12.5 µg/µl 2 µg/µl 5 µg/µl 0.01 µg/µl 0.01 µg/µl 0.01 µg/µl 0.05 µg/µl 0.05 µg/µl

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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
2.	Low Explosive Cations Na+ K+ Ba ²⁺ NH ₄ ⁺	Flame Test & Zinc Uranyl Acetate Test Sodium Cobaltinitrite Test Sulphuric Acid Test Nessler's Reagent Test	FSL/HR/CHEM-III	12.5 µg/µl 1 µg/µl 5 µg/µl 0.3 µg/µl
	Low Explosive Substances Al Sugar Sulphur (S) Charcoal (C)	Alizrin Test 1-Naphthol Test (Ring Test) Sodium Hydroxide Test Microscopic Observation and Burning Test		0.15 µg/µl
4.	High Explosive NG NC PETN TNT RDX HMX	Griess Reagent Test TLC GC-MS GC	FSL/HR/CHEM-III	0.5 µg/µl 0.05 µg/µl 0.02 µg/µl
XIV	VOICE			
1.	Voice Analysis	Voice Comparison Auditory & Voice Spectrogram	FSL/HRY/PHY	20 Hz to 20 kHz

-X-X-X-X-X-X-X-X-X-X-X-X-