Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 1 of 15

Validity 15.11.2017 to 14.11.2019 Last Amended on --

SI.	Product /	Specific Test Performed	Test Method Specification	Range of Testing /
İ	Material of Test		against which tests are	Limits of Detection
<u> </u>	į	i !	performed	

## **FORENSIC TESTING**

I.	CRIME SCENE INVESTIGATION			
1.	Narcotics Drugs and Associated Material	Spot colour  Mayers Reagent (Test for General Narcotic Alkaloid)	DFS(G)/SOP/Mob-Chem-01 Clause No. 1.10(A) Page No. 23 Issue No.: 02	Qualitative
		Marquis Reagent (Test for Opiates and Amphetamines)	Issue Date: 16/12/2016	Qualitative
		Mecke`s Reagent (Test for Heroin)		Qualitative
		Nitric acid (Test to Differemtiate Morphine from Heroin)		Qualitative
I I I I I I		Sodium Nitroprusside Reagent (Test for Methaphatamine)		Qualitative
[ ] ! ! ! !	î    -  -	Methaqualone Reagent (Test for Methaqualone)		Qualitative
		Duquenois Reagent (Test for Marihuana, Hashish, Hashish Oil, and THC)		Qualitative
		Cocain HCL and Free Base (Crack) Reagent (Test for Cocain)		Qualitative
	i	Dille-Koppanyl Reagent (Test for Barbiturates)		Qualitative
2.	Explosive Material	Identification Group-A Nitro Aromatics (T.N.T., Tetryl,T.N.B.)	DFS(G)/SOP/ Mob-Chem-01	Qualitative

Mandeep	Kumar
Conve	nor

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 2 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Group-B Nitro Esters and Nitro Amines. (RDX,Semtex, Dynamite, Smokeless Powder)	Clause No. 1.10(A) Page No. 23 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
		Group-C Inorganic Nitrate based Exploives (ANFO, Blacg Powder)		Qualitative
3.	Acid and Alkalies	Free Acid test Acidity & Basicity For PH	DFS(G)/SOP/ Mob-Chem-01 Clause No. 1.10(A) Page No. 23 Issue No.: 02 Issue Date: 16/12/2016	1 to 14
4.	Glass, Paint Metal, Spot of Occurrence, footprints/ Shoe Prints/ Tyre Prints	Physical Examination	As per DFS(G)/WP/ Phy-Sci(mobile) Clause No. 1.10(B) Page No. 24 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
5.	Electrical Wire, Fuse	Physical Examination	As per DFS(G)/WP/ Phy-Sci(mobile) Clause No. 1.10(B) Page No. 24 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
6.	Building Material	Physical Examination	As per DFS(G)/WP/ Phy-Sci(mobile) Clause No. 1.10(B) Page No. 24 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
7.	Small Arm Fire Arm Weapon, Cartridge, Bullet, Wads	Measurement of Dimensions of Weapon, Bullet, Cartridge, and Cartridge Cases etc. Spot Color Test	As per DFS(G)/WP/ Phy-Sci(mobile) Clause No. 1.10(B) Page No. 24 Issue No.: 02	Detection limit: 0.01mm

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 3 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
8.	Body Fluids and Their Stains at the Scene of Crime	Physical Measurement Preliminary Tests to Identify Different Body Fluids or Stains Viz. Spot Test: Kastle – Meyer Test Acid Phosphatase Spot Test	Issue Date: 16/12/2016 SOP No: DFS(G)/SOP/Mob. Bio-02 and DFS(G)/SOP/Mob.Sero-03 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
9.	Cow Meat, Blood and Weapons	Preliminary Tests to Identify Different Body Fluids or Stains viz.  Benzidine Test/ Kastle – Meyer Test – Spot Test  Test for Origin of Species viz. Cross – over Electrophoresis Method & Precipitin Tube Method.	SOP- DFS(G)/SOP/ MOB-CM-1 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
II.	PHYSICS			
1.	Counterfeit Currency	Identification & Comparison of Known (Control) and Questioned (Forged) Currency	Section-1 of Laboratory Working Procedure Manual DFS-G-Physics. Page No. 6-9 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
2.	Voice Analysis	Identification & Comparison of Questioned Voice & Known (Control) Voice of Person(s)	Section-2 of Laboratory Working Procedure Manual DFS-G-Physics Page No. 10-16 Issue No.: 02 Issue Date: 16/12/2016	Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 4 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
III.	Chemistry			
1.	Low Explosives (Exploded & Unexploded) & Pyro - Technic Materials	Identification Chemical Colour	DFS(G)WP-CHEM-1 Issue No.: 02 Working Procedure Manual on explosive, DFS Ministry of Home Affairs, New Delhi	Qualitative
2.	High Explosive (Exploded & Unexploded)	Identification	DFS(G)WP-CHEM-1 Issue No.: 02 Working Procedure Manual on Explosive DFS Ministry of Home Affairs, New Delhi	Qualitative
		Colour Tests Specific for Different Types of High Explosive.	of Home Affairs, New Deini (TLC Separation technique HPLC technique UV-VIS Spectrophotometric technique GC-MS/ LC-MS technique. FTIR Technique Gas Chromatographic technique)	Qualitative
3.	Alcohols & other selected items related to excise	Identification & Estimation of Alcohols Related to Excise Cases	DFS(G)WP-CHEM-1 Issue No: 2,	Qualitative
	cases	Colour test, Specific for Individual Group of Alcohols Using Specific Gravity Method, GC-HS Instrumental Techniques	DFS(G)WP-CHEM-3 Issue No: 2,	1%mg to 320%mg
4.	Arson cases examination	Identification of Traces of Petroleum/Inflammables in the Arson Exhibits by Chemical Test Using TLC, Gas Chromatography Techniques	DFS(G)WP-CHEM-1 Issue No: 2,	Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 5 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Pharmaceutical Products & drugs	Identification of Chemical by using TLC , GC,GC- MS, HPLC, FTIR, UV Techniques	DFS(G)WP-CHEM-1 Issue No: 2	Qualitative
6.	General Alkaloids Nicotine	Identification of Chemical by using TLC, GC/GC- MS/HPLC/FTIR/UV Techniques Identification by Quantitative Analysis	DFS(G)WP-CHEM-1 Issue No: 2	Qualitative 0.005 %
7.	MS/HSD/SKO/ LDO/FO/ SOLVENTS	Density	IS 1448 (Part 16)	0.660gm/ml to 1 gm/ml 660 kg/m³ to 1000 kg/m³
8.	MS/HSD/SKO/	Distillation	IS 1448 (Part 18)	Qualitative
	SOLVENT	Temperature		30 °C to 400 °C
	! ! }	Volume		0 to 100 % Vol. ml
9.	SKO/HSD/	Flash Point (Abel)	IS 1448 (Part 20)	19 °C to 70 °C
	SOLVENTS	Flash Point (Pensky Marten's)	IS 1448 (Part 21)	40°C to 300°C
10.	LDO/ HSD	Kinematic Viscosity at 40 °C	IS 1448 (Part 25)	2.0 cSt to 15.0 cSt
11.	FO	Kinematic Viscosity at 50 °C	IS 1448 (Part 25)	100 cSt to 400 cSt
11.	SKO	Smoke point	IS 1448 (Part 31)	10 mm to 30 mm
12.	MS	Benzene content	ASTM D-3606	0.1 % to 5 %
IV.	NARCOTICS			

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 6 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
1.	Narcotics/ Psychotropic Substances Cannabis Products	Identification & Estimation of Narcotics Drugs Enlisted as Per NDPS Act, 1985. Botanical Examination Colour	As per Standard UNO Procedure Manuals DFS(G)WP-NARCOTICS Issue No.: 02 Issue Date: 16/12/2016 Working Procedure Manual for Narcotics &	Qualitative
2.	Ganja	Colour Botanical Examination Identification by qualitative analysis	Psychotropic Subs. DFS Ministry of Home Govt of India New Delhi (TLCGC-MS)	Qualitative
3.	Charas	Colour test Botanical Examination Identification by Qualitative Analysis		Qualitative
4.	Cannabis   Preparation	Color test Botanical Examination Identification		Qualitative
5.	Opium & its derivatives	Colour test Botanical Examination Quantitation of Morphine by HPLC Method		Qualitative
6.	Poppy Straw	Colour test Botanical Examination		Qualitative
7.	Heroin/ Crude heroin/Brown Sugar	Colour test Identification		Qualitative
8.	Morphine	Colour Test Identification	Standard UNO Procedure Manuals	Qualitative
9.	Methaqualone	Colour Test Identification	DFS(G)WP-NARCOTICS Issue No.: 02	Qualitative
10.	Barbiturates & Its Derivatives	Colour Test Identification	Issue Date: 16/12/2016	Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 7 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
11.	Benzo- Diazapines & Its Derivatives	Colour Test Identification	Working Procedure Manual for Narcotics & Psychotropic Subs. DFS	Qualitative
12.	Cocaine	Colour Test Identification	Ministry of Home Govt of India New Delhi	Qualitative
13.	Amphetamine/ Metha Amphetamine	Colour Test Identification	(TLC/ GC/GC-MS/HPLC/ FTIR/UV)	Qualitative
14.	Miscellaneous Drugs e.g. such as Paracetamol, Brufen, Diclofenac, Caffeine use as adulteration in Narcotic Drugs	Colour Test Identification		Qualitative
V.	CHEMISTRY	*     		
1.	Blood / Urine Samples	Ethyl Alcohol	SOP DFS(G) WP-CHEM-3 (BA) Issue No.: 02 Issue Date: 16/12/2016 [Gas Chromatographic - Head Space Technique Using Internal Standard Method]. Ref:- (1) Gas Chromatographic Headspace Analysis by H.Hachenberg & A.P.Schmidt (2) Paper Presented & Accepted in IX All India	1 mg% to 320 mg%.

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 8 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Forensic Science Conference Shimla, from: 27th - 29th April, 1995 on Head Space Gaschromatographic Analysis of Volatile Components Mainly Ethyl Alcohol in Large Number of Blood-Samples by Mr. A.P.Patel, Mr. J.S.Dave, Dr. M.S.Dahiya, Dr. J.M.Vyas.	
VI.	FORENSIC PSYCH	IOLOGY		
1.	Live Human Subjects, i.e. Suspects/ Accused, Witness, Complaint / Victim	Varacity of Statement Plolygraph Test BEOS Test for Varification of Varacity of Statement of the Suspects/Accused, Witness, Complainant/Victim Narco Analysis (to reveal the Information)	Working Procedure Manual No.: DFS-G-WP-Forensic Psychology of DFS, Gandhinagar Issue No.: 02 Issue Date: 16/12/2016	Qualitative
VII.	FINGERPRINTS			
1.	Ten Digit Finger Print Slip of Convicted Criminals	Update Database in AFIS.  Scanning of Slips Quality Check Verification Submission for Update	Fingerprint Manual DFS-G-Fingerprint Based Upon Fingerprint Manual of NCRB Issue No.: 02 Issue Date: 16/12/2016	Qualitative
2.	Ten digit Finger Print Slip of	Automated Finger Print Identification Based on		Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 9 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Arrested Criminals.	Henry Finger Print Classification System. Matching with Database Scanning of Slips Quality Check Verification Submission for Update		
3.	Latent/ Chance print at scene of crime	Lifting & Developing of Prints at Scene of Crime. Update Unsolved Latent Print DB & Matching With Rolled Print DB of AFIS.  Scanning / Uploading of CP Photograph  Quality Check  Submission  Verification  Update of Untraced Chance Prints.		Qualitative
VIII.	COMPUTER FORE	NSIC		
1.	Digital storage media like Hard disk, USB devices, floppy disk, CD, DVD, cell phones, SIM card, PDA.	Retrieval of Content of Digital Storage Media. Retrieval of Deleted Data/ Tampered Data. Creaking of Password Retrieval of Data from Cell Phone/ SIM Card.	Laboratory working Procedure Manual DFS-G- Computer Forensic-issue- 02,Issue Date: 16/12/2016	Qualitative
IX.	BIOLOGY			

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 10 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
1.	Detection & Origin of Biological Fluids and Tissues.	Biological Examination: Blood Detection Test TMB Test Kastle Mayer Test Hematin Crystal Test	DFS(G)WP-Biology Issue No.: 02 Issue Date: 16/12/2016	Qualitative
		Semen Detection Test UV Test Acid Phosphatase Test Crystal Test Microscopic examination		Qualitative
		Saliva Detection Test Amylase Test		Qualitative
		Serological Examination Origin of Species Identification Gel diffusion Test Cross over electrophoresis Test	DFS(G)WP-Serology Issue No.: 02 Issue Date: 16/12/2016	Qualitative
		ABO Blood Group Typing Absorption Elution Method		Qualitative
X.	DNA FINGER PRIN	ITING		
1.	Individualization of Biological Samples i.e.	DNA Isolation	DFS(G)WP-DNA Issue No: 03 Issue Date: 16/12/2016	Qualitative
	blood, semen, hair with root, tissue sample,	Quantitation	DFS(G)WP-DNA Issue No: 03 Issue Date: 16/12/2016	0.005 to 50 ng/μl
	bone e	STR Amplification by using PCR gene specific primers	DFS(G)WP-DNA Issue No: 03 Issue Date: 16/12/2016	Qualitative
		Genotyping Capillary Electrophoresis	DFS(G)WP-DNA Issue No: 03	Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 11 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	   		Issue Date: 16/12/2016	
XI.	QUESTIONED DO	CUMENTS		
1.	Handwriting/ Signatures Identification, Detection of Forgery	Individual writing characteristics Hand magnifier, Stereo microscopy VSC-5000, DOCUCENTER NIRVIS.	Working Procedure Manual DFS-G (Q.D) based upon DFS manual Sr. No. 6 to 9 page No. 8-34 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
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-5000, DOCUCENTER NIRVIS)	Working Procedure Manual DFS-G (Q.D)C based upon DFS manual Sr. No. 9-10 page No. 35-45 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
3.	Examination of Typewriting, Printed Matter, Computer Printouts, Xerox Copies, Identification	Printing defects Hand magnifier Stereo microscopy Photography in different light sources Spectroscopy Side-by-side comparison & superimposition (Projectina universal comparison projector) VSC-5000, DOCUCENTER NIRVIS	Working Procedure Manual DFS-G (Q.D)based upon DFS Manual Sr. No. 12 to 17 page No. 48-65 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
4.	Examination of Lottery Ticket	Security printing Hand magnifier	Working Procedure Manual DFS-G (Q.D)based upon	Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 12 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Stereo microscopy Photography in different light sources Spectroscopy (VSC-5000, DOCUCENTER NIRVIS)	DFS Manual Sr. No. 17 page No. 64-65 Issue No.: 02 Issue Date: 16/12/2016	
5.	Comparison of Paper Including Stamp Paper/Stamps & Other Security/ Legal Papers	2Physical examination Color Size Weight Fluorescence UV Water mark Fiber direction Printing defects Stereo Microscopy UV Light Transmitted Light Spectroscopy (VSC-5000 Docucenter Nirvis)	Working Procedure Manual DFS-G (Q.D)based on DFS Manual Sr. No. 18-20 page No. 66-72 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
6.	Determination of Age of Document	Relative age Water mark Chronological variation in writing/ signature Other related marks on the paper Stereo microscopy Spectroscopy VSC-5000, DOCUCENTER NIRVIS	Working Procedure Manual DFS-G (Q.D)based upon DFS manual Issue No.: 02 Issue Date: 16/12/2016	Qualitative
7.	Examination of Stamp Impressions And Seal Comparison	Physical examination → -Color -Size Fluorescence UV Stereo microscopy Photography in different light sources Side-by-side comparison	Working Procedure Manual DFS-G (Q.D)based on DFS Manual Sr. No. 18 page No. 66-67 Issue No.: 02 Issue Date: 16/12/2016	Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 13 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		& superimposition (Projectina universal comparison projector) Spectroscopy (VSC-5000, DOCUCENTER NIRVIS)		
8.	Examination of Sequence of Strokes	Physical examination Stereo microscopy Spectroscopy (VSC-5000, DOCUCENTER NIRVIS)	Working Procedure Manual DFS-G (Q.D)based upon DFS manual Sr. No. 22 page No. 78-81 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
9.	Examination of Credit Card, Travel Documents	Physical Examination Security Features Paper Examination, Thread Examination Stereo Microscopy Spectroscopy (VSC-5000, DOCUCENTER NIRVIS)	Working Procedure Manual DFS-G (Q.D)based upon DFS manual sr. No. 11 page No. 46-47 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
10.	Examination of Indented Writings	Physical Examination Electrostatic Development of Indentations (ESDA) Oblique Light Photography VSC-5000, DOCUCENTER NIRVIS.	Working Procedure Manual DFS-G (Q.D) based upon DFS manual Sr. No. 10 page No. 35-45 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
11.	Examination of Charred Documents	Physical Examination & Retrieval Stereo Microscopy Photography in Different Light Sources Retrieval Using Polymers/ Hardeners VSC-5000, DOCUCENTER NIRVIS	Working Procedure Manual DFS-G (Q.D)based upon DFS manual sr. No. 10 page No. 35-45 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
12.	Examination of Carbon Paper,	Physical examination Transmitted light	Working Procedure Manual DFS-G (Q.D)based upon	Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 14 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Ribbon, Stencil etc.	Stereo microscopy, Photography, VSC-5000, DOCUCENTER NIRVIS	DFS Manual Sr. No. 09, 14 page No. 27-34, 53-56	
XII.	BALLISTICS DIVISION			
1.	Firearm	Identification (Physical Examination Appearance, Trade Mark) Physical Dimension	Laboratory working procedure manual DFS-G- Ballistics Issue No.: 02 Issue Date: 16/12/2016	Qualitative
2.	Pellets, Bullets, Cartridge Cases, Cartridge and its Components	Identification and Comparison. (Physical Examination, Test Firing and Microscopic Examination and Comparison.)	Laboratory working procedure manual DFS-G- Ballistics Clause: 4.2 to 4.7 and 4.21 Page No. 14 to 18 and 39 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
3.	Target Material	Identification of projectile mark/hole: Chemical test. Spot Test Determination of Rage of fire Direction of Firing and Sequence of Firing. Evaluation of Fire arm Injury and Wound Ballistics Parameters	Laboratory working procedure manual DFS-G-Ballistics. Clause: 4.18 to 4.20 Page No. 31 to 34 Issue No.: 02 Issue Date: 16/12/2016	Qualitative
4.	Gun Shot Residues	Identification of Shooter and Bullet Hole: Chemical test: Spot Test	Laboratory Working Procedure Manual DFS-G- Ballistics Clause: 4.20 Page No.: 34  Issue No.: 02 Issue Date: 16/12/2016	Qualitative

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6556 Page 15 of 15

SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are	Range of Testing / Limits of Detection
			performed	