

Laboratory **Chemical Laboratory Geological Survey of India Southern Region
Hyderabad, GSI Complex, Bandlagura, Hyderabad, Telangana**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-7976**

Page 1 of 3

Validity **10.10.2018 to 09.10.2020**

Last Amended on --

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

I.	SOIL AND ROCK			
1.	Soil & Stream Sediment	SiO ₂	GSI/SR/HYD /SOP- XRF/01/1A Issue No. 01 Issue Date: 25.04.2014	33 % to 89.00 %
		Al ₂ O ₃		3 % to 29.00 %
		TiO ₂		0.2 % to 3.00 %
		Fe ₂ O ₃		2 % to 19.00 %
		MnO		0.03 % to 1.00 %
		CaO		0.13 % to 4.0 %
		MgO		0.12 % to 4.00 %
		Na ₂ O		0.11 % to 4.00 %
		K ₂ O		0.125 % to 5.00 %
		P ₂ O ₅		0.027 % to 0.40 %
		Ba		42 to 2000 mg/kg
		Co		2 mg/kg to 97 mg/kg
		Cr		12 mg/kg to 4310 mg/kg
		Cu		5 mg/kg to 1114 mg/kg
		Ga		6 mg/kg to 39 mg/kg
		Nb		5 mg/kg to 95 mg/kg
		Ni		3 mg/kg to 276 mg/kg
		Pb		10 mg/kg to 2700 mg/kg
		Rb		9 mg/kg to 470 mg/kg
		Sc		3 mg/kg to 28 mg/kg
Sr	20 mg/kg to 480 mg/kg			
Th	3 mg/kg to 70 mg/kg			
V	10 mg/kg to 247 mg/kg			
Y	11 mg/kg to 67 mg/kg			
Zn	31 mg/kg to 3800 mg/kg			
Zr	70 mg/kg to 500 mg/kg			
	Be	GSI/SR/HYD /SOP-ICPMS/ 01/1B Issue No.01	1.0 mg/kg to 26 mg/kg	
	Ge		0.5 mg/kg to 3.0 mg/kg	
	Sn		5.0 mg/kg to 370 mg/kg	

**Sangeeta Negi
Convenor**

**Mallika Gope
Program Manager**

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Page 2 of 3

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Mo	Issue Date:25.04.2014	0.30 mg/kg to 90 mg/kg
		La		15 mg/kg to 165 mg/kg
		Ce		40 mg/kg to 400 mg/kg
		Pr		3.0 mg/kg to 60 mg/kg
		Nd		10 mg/kg to 200 mg/kg
		Sm		2.0 mg/kg to 20 mg/kg
		Eu		0.5 mg/kg to 3.0 mg/kg
		Gd		2.0 mg/kg to 10 mg/kg
		Tb		0.50 mg/kg to 2.0 mg/kg
		Dy		2.0 mg/kg to 10 mg/kg
		Ho		0.50 mg/kg to 2.0 mg/kg
		Er		1.0 mg/kg to 8.0 mg/kg
		Tm		0.5 mg/kg to 1.0 mg/kg
		Yb		1.5 mg/kg to 10 mg/kg
		Lu		0.20 mg/kg to 2.0 mg/kg
		Hf		1.0 mg/kg to 20 mg/kg
		Ta		0.5 mg/kg to 15.0mg/kg
		W		5.0 mg/kg to 125 mg/kg
		U		1.0 mg/kg to 20 mg/kg
2.	Rock	SiO ₂	GSI/SR/HYD /SOP-XRF/ 01/1C	33 % to 96 %
		Al ₂ O ₃	Issue No.01	0.20 % to 30 %
		TiO ₂	Issue Date: 25.04.2014	0.01 % to 4 %
		Fe ₂ O ₃		0.2 % to 18 %
		MnO		0.01 % to 0.2 %
		CaO		0.08 % to 16 %
		MgO		0.05 % to 45 %
		Na ₂ O		0.02 % to 7 %
		K ₂ O		0.06 % to 15 %
		P ₂ O ₅		0.01 % to 1.5 %
		Ba		17 mg/kg to 2420 mg/kg
		Co		1 mg/kg to 140 mg/kg
		Cr		5 mg/kg to 1300 mg/kg
		Cu		2 mg/kg to 198 mg/kg
		Ga		0.5 mg/kg to 36 mg/kg

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Page 3 of 3

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		Nb		1 mg/kg to 510 mg/kg
		Ni		1.5 mg/kg to 994 mg/kg
		Pb		5 mg/kg to 196 mg/kg
		Rb		3 mg/kg to 530 mg/kg
		Sc		0.5 mg/kg to 55 mg/kg
		Sr		10 mg/kg to 1400 mg/kg
		Th		1 mg/kg to 112 mg/kg
		V		4 mg/kg to 526 mg/kg
		Y		4 mg/kg to 166 mg/kg
		Zn		4 mg/kg to 207 mg/kg
		Zr		6 mg/kg to 1540 mg/kg
		Be	GSI/SR/HYD /SOP-ICPMS/ 01/1D	1.0 mg/kg to 26 mg/kg
		Ge	Issue No.01	0.5 mg/kg to 3.0 mg/kg
		Sn	Issue Date: 25.04.2014	5.0 mg/kg to 370 mg/kg
		Mo		0.30 mg/kg to 90 mg/kg
		La		15 mg/kg to 165 mg/kg
		Ce		40 mg/kg to 400 mg/kg
		Pr		3.0 mg/kg to 60 mg/kg
		Nd		10 mg/kg to 200 mg/kg
		Sm		2.0 mg/kg to 20 mg/kg
		Eu		0.5 mg/kg to 3.0 mg/kg
		Gd		2.0 mg/kg to 10 mg/kg
		Tb		0.50 mg/kg to 2.0 mg/kg
		Dy		2.0 mg/kg to 10 mg/kg
		Ho		0.50 mg/kg to 2.0 mg/kg
		Er		1.0 mg/kg to 8.0 mg/kg
		Tm		0.5 mg/kg to 1.0 mg/kg
		Yb		1.5 mg/kg to 10 mg/kg
		Lu		0.20 mg/kg to 2.0 mg/kg
		Hf		1.0 mg/kg to 20 mg/kg
		Ta		0.5 mg/kg to 15.0 mg/kg
		W		5.0 mg/kg to 125 mg/kg
		U		1.0 mg/kg to 20 mg/kg