

CSIR-CIMFR CENTRAL INSTRUMENTATION FACILITY (CIF)

Bhagwant Singh Advanced Mining Research Centre

Sl. No.	Name of Instrument	Purpose of Instrument	Contact person	Remarks	For booking slot
1	Double Beam Atomic Absorption Spectrophotometer	Metal analysis in water	Dr. Bably Prasad, Senior Principal Scientist Natural Resources and Environment Management Phone: 09431122060 (M)	Available	(drbablyprasad@yahoo.com)
2	Condition Monitoring Instrument	The instrument is for monitoring health of running equipments and identifying the probable parts in deteriorating stage	Dr. Sujit K. Mandal Senior Principal Scientist, Mine Mechanisation and Technology Development, Phone : +91-9471191144 (M)	Available	(skm.cimfr@gmail.com)
3	GNSS (Global Navigation Satellite System)	The instrument is a satellite based location monitoring instrument used for surveying and mapping work for mines		Available	
4	High Performance Computing (HPC) System	<ul style="list-style-type: none"> Numerical analysis of Geomining problems using parallel numerical programmes with 32 nodes, 16 cores/node Processors, Terra FLOPS computing speed, and 200 TB Storage Capacity To provide server facility for scientific use software packages such as INTEL-C COMPILER, C, C++, FORTRAN, MATLAB, 	Dr. K.P. Yadava Principal Scientist, Mine Mechanisation and Technology Development, Phone : +91-9471191144 (M) and Dr. Ranjan Kumar, Principal Scientist, Mine Mechanisation and Technology Development, Phone: 8252188063	Available	(kpyadava@gmail.com) (ranjan4k@gmail.com)

		ANSYS, PYTHON, LINUX, ALTAIR PBS SCHEDULER, etc.			
5	ICP-MS	Elemental analysis in water, sediments and other geological and environmental samples at very low level concentration (ppb/ppt).	Dr. Abhay Kumar Singh Principal Scientist Natural Resource and Environmental Management Division CSIR-CIMFR, Barwa Road, Dhanbad-826015, Phone : +91-9835324263 (M)	Available	(singhak.cimfr@gmail.com)
6	AAS	Elemental analysis in water, sediments and other geological and environmental samples		Available	
7	Ion Chromatograph	Analysis of anions (F, Cl, Br, PO ₄ , NO ₃ and SO ₄ in water sample		Available	
8	Microwave Digestion System	Digestion of rock, soil and sediment samples for chemical analysis		Available	
9	Gas Chromatograph (GC)	Analysis of gaseous samples like carbon dioxide (CO ₂), oxygen (O ₂), methane (CH ₄), and carbon monoxide (CO)	Dr. Siddharth Singh Principal Scientist Natural Resource and Environmental Management Division CSIR-CIMFR, Barwa Road, Dhanbad-826015, Phone : +91-9431122769 (M)	Available	(ssgcmri@yahoo.com)
10	TOC analyzer	Analysis of total organic carbon in water and soils		Available	
11	GC-MS-MS	Analysis of organic contaminants, PAH and pesticides in environmental samples	Dr. G. C. Mondal Principal Scientist Natural Resource and Environmental Management Division CSIR-CIMFR, Barwa Road, Dhanbad-826015 Phone : +91-9835383060 (M)	Available	(gc_mandal@yahoo.com)

12	Optical Emission Spectrometer (OES)	Chemical composition analysis of Fe base, Cu base and Al base alloy	Mrs.MousumiMallick, Scientist, Phone : +91-9204551490 (M)	Available	(mousumi.mallick_cimfr@yahoo.co.in)
13	DM 4500P Microscope	Petrographic Study of Coal/Coke/Char	D. Mohanty Sr. Scientist, Nonconventional Gases Division, Mobile: +91 9471304757 (M)	Available	(drdmohanty@ymail.com)
14	ElementarvarioMacro Cube Elemental Analyser	Elemental analysis of Coal/Coke/Char		Available	
15	FE-SEM with EDS	Morphological Characterization of materials and elemental analysis	Dr K M P Singh, Sr. Scientist, Coal Preparation And Carbonisation, Phone: 09471192491 (M)	Available	(singh_kmp@yahoo.co.in)
16	STA-8000 with online and off line FT-IR and GC-MS Hyphaneted system	in-situ Analysis of Evolved Gas of materials		Available	
17	High Resolution 3D X-ray Microscopy and computed Tomography Laboratory	Revealing detailed 3D imaging for microstructure, characterization of coal, shale, rock and any material, estimating the volume of all internal structures, volume-based inspection of essential and accessory components of material	Dr. V. A. Mendhe Sr. Principal Scientist M-8002812047	To be procured/Under process	(vamendhe@cimfr.nic.in)
18	FTIR	Functional groups of coal, shale and rocks, coal mines dust, highway dust, civil work dust and urban dust analysis	Dr. J. K. Pandey Sr. Principal Scientist M-9431727134	To be shifted after furnishing of room	(jaikrishnapandey@gmail.com)
19	Coal, Shale and Rock Petrography	Maceral of coal and shale and vitrinite reflectance, mineralogical constituents of shale and rocks	Dr. V. A. Mendhe Sr. Principal Scientist M-8002812047 and	To be shifted after furnishing of room	(vamendhe@cimfr.nic.in) (ddmohanty@cimfr.nic.in)

			Dr. Debadutta Mohanty , Sr. Scientist 9471304757 (M)		
20	Rock-Eval Pyrolysis	Geochemical analysis of coal and shale for source rock potential evaluation for hydrocarbons	Dr. V. A. Mendhe Sr. Principal Scientist M-8002812047	To be procured/Under process	(vamendhe@cimfr.nic.in)
21	CHNS and TOC	Carbon, hydrogen, nitrogen, sulphur, oxygen and total organic content of coal, shale, biomass and rocks	Dr. V. A. Mendhe Sr. Principal Scientist M-8002812047 and Dr. Debadutta Mohanty , Sr. Scientist 9471304757 (M)	To be shifted after furnishing of room	(vamendhe@cimfr.nic.in) (ddmohanty@cimfr.nic.in)
22	BET Surface Area and Particle Size Analysis	Surface area, pore size, pore volume, pore structure, fractal analysis of coal, shale and rock. Particle size analysis of mine dust, flyash, coal dust and any material	Dr. V. A. Mendhe Sr. Principal Scientist M-8002812047 Dr. Prashant, M-9431377071,	To be shifted after furnishing of room	(vamendhe@cimfr.nic.in) (prashant@cimfr.nic.in)
23	X-Ray diffractometer	The clay and minerals in coal, shale and rock by comparing the reference pattern number from the ICDD international database, mineral composition, associated phases	Dr. J. K. Pandey Sr. Principal Scientist M-9431727134	To be shifted after furnishing of room	(jaikrishnapandey@gmail.com)