

**Major Core Competencies/ Exportable R&D Services of the laboratories and Delivery Mode of R&D Services  
At a Glance  
Biological Sciences Group**

S.No	Delivery Mode of Exportable R&D Services → Core Competencies ↓	Testing	Training	Consultancy	Surveys / Studies	Contract Research			Tech. Trans
						Design	Product	Process	
1	Agro & Food Biotechnology / Plants Biotechnology / Tea Sciences / Floriculture	CFTRI RRL- Jammu CIMAP IHBT	CFTRI NBRI CIMAP IHBT	NBRI IHBT RRL – Jammu CIMAP	CIMAP IHBT NBRI	NBRI IHBT RRL – Jammu CIMAP	CFTRI RRL – Jammu CIMAP	CFTRI	IHBT CIMAP
2	Environmental Biotechnology / Biodiversity	ITRC IGIB	NBRI	NBRI IHBT ITRC	ITRC IHBT NBRI	NBRI IHBT ITRC	ITRC		IHBT
3	Biotechnology Molecular / Biology / Bioinformatics	CFTRI IHBT ITRC RRL – Jammu CIMAP IICB CDRI CCMB	IMTECH CFTRI CDRI NBRI CIMAP	IMTECH IGIB NBRI IHBT ITRC RRL – Jammu CIMAP	ITRC IMTECH NBRI CIMAP CDRI	IMTECH IGIB NBRI IHBT ITRC RRL – Jammu CIMAP CDRI CCMB	IMTECH CFTRI ITRC RRL – Jammu CIMAP CDRI	CFTRI CDRI	IHBT CIMAP
4	Biochemistry	CFTRI IHBT ITRC RRL – Jammu CIMAP CCMB	CFTRI CDRI NBRI CIMAP	IGIB NBRI IHBT ITRC RRL – Jammu CIMAP	ITRC CIMAP	NBRI ITRC CIMAP CDRI	IGIB NBRI ITRC IHBT RRL – Jammu CIMAP CDRI	CFTRI ITRC RRL- Jammu CIMAP CDRI	CFTRI CDRI
5	Drugs / Pharmaceuticals	CCMB ITRC RRL – Jammu CIMAP CDRI	CDRI NBRI CIMAP	CDRI IGIB NBRI IHBT ITRC RRL – Jammu CIMAP	ITRC CIMAP	NBRI ITRC CIMAP CDRI IICB	IGIB NBRI IHBT ITRC CIMAP CDRI	ITRC CIMAP CDRI CIMAP CDRI	CDRI
6	Genetics / Genomics / Proteomics / Cell Biology	CIMAP IICB IGIB CCMB	CFTRI CBRI CIMAP CDRI		CIMAP	NBRI CIMAP CDRI	IGIB NBRI CIMAP CDRI	CIMAP CDRI	
7	Clinical Trials / Bio-screening	CDRI CCMB IGIB							

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#### Chemical Sciences Group

S.No	Delivery Mode of Exportable R&D Services Core Competencies → ↓	Testing & Evaluation	Training	Consultancy	Contract Research			Surveys
					Design	Product	Process	
1.	Agro technology			RRL-Jor		RRL-Jor	RRL-Jor	
2.	Biotechnology	NCL, IICT		NCL, RRL-Jor, IICT	NCL	NCL, RRL-Jor, CSMCRI, CLRI, IICT	NCL, RRL-Jor, CSMCRI	
3.	Chemicals	NCL, CLRI	CLRI	NCL RRL-Jor, CSMCRI CLRI IICT	NCL CSMCRI	NCL, RRL-Jor, CSMCRI, CLRI, IICT	NCL, RRL-Jor, CSMCRI, CLRI	
4.	Drugs/ Pharmaceuticals	IICT		IICT		IICT	IICT	
5.	Environment			RRL-Jor, CSMCRI, CLRI		RRL-Jor, CSMCRI	CSMCRI	CLRI
6.	Membrane Science & Technology			CSMCRI	CSMCRI	CSMCRI	CSMCRI	
7.	Catalysis	NCL		NCL	NCL	NCL	NCL	
8.	Polymer Science & Engineering	NCL		NCL	NCL	NCL	NCL	
9.	Refining Technology	IIP	IIP	IIP		IIP	IIP	

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**Physical and Information Sciences Group**

S. No	Delivery Mode of Exportable R&D Services Core Competencies → ↓	Testing	Training	Consulting	IPR Services	Surveys Studies	Contract Research		
							Design	Product	Process
1	Material Science / Characterization	NPL	NPL	NPL					
2	Measurement Standards	NPL	NPL	NPL					
3	Instrumentation	NPL CSIO	CSIO	CSIO NGRI	NGRI	NPL CSIO	NPL CSIO	CSIO	
4	Semiconductor Devices			CEERI			CEERI	CEERI	CEERI
5	Very large ICD	CEERI	CEERI	CEERI			CEERI	CEERI	
6	Offshore Resources			NIO		NIO			
7	Ocean Sciences		NIO	NIO					
8	Water / Mineral / Hydrocarbon Exploration, Assessment & Management					NGRI			
9	Earthquake Hazard Management		NGRI	NGRI		NGRI			
10	Geo environmental / Lithosphere studies		NGRI	NGRI		NGRI			
11	Knowledge Management		NISTADS	NISTADS	NISTADS	NISTADS			
12	Science Technologies, education		NISTADS	NISTADS		NISTADS			
13	Science writing / editing		NISCAIR	NISCAIR					
14	Library Science		NISCAIR	NISCAIR					
15	Database creation		NISCAIR	NISCAIR					

## Major Core Competencies/ Exportable R&D Services of the laboratories and Delivery Mode of R&D Services

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#### Engineering Sciences Group

S.No.	Delivery Mode of Exportable R&D Services → Core Competencies ↓	Testing & Evaluation	Consultancy	Contract Research	Turnkey Project	Technology Transfer	Training
1.	Environment Impact Assessment	NEERI	NEERI				NEERI
2.	Waste water treatment	NEERI	NEERI	NEERI	NEERI	NEERI	NEERI
3.	Refractory & Advanced Ceramics	NML, CGCRI	NML	NML			
4.	Spice & Oil seed Processing				RRL(T)		
5.	Mineral Beneficiation		RRL(Bhu)	RRL(Bhu)			
6.	Extractive Metallurgy		RRL(Bhu)	RRL(Bhu)			
7.	Characterization & Synthesis of Composites			RRL(Bhopal)			
8.	Wind Tunnel Modelling & Testing		NAL	NAL			
9.	Computational Fluid Dynamics		NAL	NAL			
10.	Transmission Line Towers	SERC	SERC	SERC			
11.	Road Research & Highway Design	CRRI	CRRI	CRRI	CRRI	CRRI	CRRI
12.	Rapid Prototyping & Tooling		CMERI	CMERI			
13.	Disaster Mitigation & EQ Resistant Structures	CBRI	CBRI	CBRI			
14.	Coal Liquefaction & Gasification		CFRI	CFRI			
15.	Bio-Ceramics, Electro Ceramics, Non oxide Ceramics	CGCRI	CGCRI	CGCRI			CGCRI
16.	Mining Technology		CMRI	CMRI			