

भारत सरकार /Government of India
भारतीय भूवैज्ञानिक सर्वेक्षण / Geological Survey of India
उपमहानिदेशक व मिशन-4 रसायन का कार्यालय
OFFICE OF ADDL. DIRECTOR GENERAL & HEAD NATIONAL MISSION – IV
15 A & B, कीड स्ट्रीट / Kyd Street
कोलकाता / Kolkata-700016

दिनांक/ Date: 08-04-2019

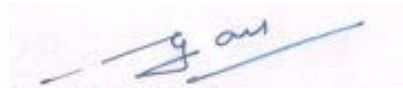
परिपत्र /Circular

सक्षम अधिकारी ने रसायन प्रयोगशालाओं के विभिन्न उपकरणों तथा रसायनज्ञों के कार्य लक्ष्य में संशोधन हेतु एक समिति गठित की है। समिति को यह दायित्व दिया गया है कि वह निम्नलिखित मुद्दों पर विचार विमर्श कर अपनी सिफारिश देगी। इस संबंध में आपकी सलाह व परामर्श आमंत्रित हैं। आप अपनी सलाह अधोवर्णित मेल पर आपका दिनांक 16 अप्रैल 2019 तक भेजने का कष्ट। इस परिपत्र के साथ वर्तमान प्रचलित व्यवस्था के अनुरूप विभिन्न लक्ष्य आपके अवलोकन हेतु संलग्न हैं।

The competent authority is pleased to constitute a committee for considering the revision of targets of individual officer, equipment and associated issues of Chemical Labs. The committee is expected to deliberate on following issue and give its recommendations. Your suggestion and feedback on these issues are solicited and the same may be sent to the mail id given below on/ before 16th April 2019 for your reference current target pertaining to equipment and Chemist is attached herewith.

1. प्रयोगशालाओं के शिफ्ट आधारित ऑपरेशन की समय-सारणी।
Timing of Shift based operation of Labs.
2. अधिकारी के लिए निर्धारित व्यक्तिगत लक्ष्य का संशोधन
Revision of target for individual Chemists
3. उपकरणों के मासिक लक्ष्य का मूल्यांकन व संशोधन
To assess the output of each instruments month wise
4. प्रस्तावित परिवर्तनों के लिए अतिरिक्त संसाधनों की आवश्यकता।
Requirement of additional logistics and resources for proposed changes
5. प्रस्तावित परिवर्तनों से संबंधित कोई अन्य मुद्दा।
Any other issue related to proposed changes.

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उमहानिदेशक मिशन-4 व रसायन

Analytical Norms for Sr. Chemist, Chemist and Asst. Chemist for NGCM SAMPLES

Sample/Package	Instrument	No. of Elements	Existing Norms per Chemist	Proposed Norms per Chemist	Existing Norms per Instrument	Proposed Norms per Instrument	Comments
A	XRF	24	200		600		
B	GF-AAS	1	150		450		
D	AAS with FIAS	1	150		450		
E	ISE	1	150		300		
F	GF-AAS	2	200		400		
G	DMA	1	500		500		
H	ICP-MS	23	150		600		
J	ICP-MS	9	150		300		
W (A)		9	25		25		
W (B)	ICP-MS	50	100		100		
W (C)			100		100		

Detection Limits of Non-NGCM Samples for Different Packages

Sl No.	Method/ Technique to be followed	Elements to be determined (Detection Limit within Parenthesis)	Existing Norms per Chemist	Proposed Norms per Chemist	Existing Norms per Instrument	Proposed Norms per Instrument	Comments
1.	ICP-OES Inductively Coupled Plasma Atomic Emission Spectroscopy)	Simultaneous (34 elements) measurements (% to ppm level) Sequential (20 elements) – Cu, Pb, Zn, Cd, Mn, Fe, Cr, Al, Co, Ni, Ba, Sr, Y, Sc, V, No, Nb, B, Na, K, Ag. (% to ppm level)	133 75		400 150		
2.	XRF	(i)SiO ₂ , Al ₂ O ₃ , Fe ₂ O ₃ , TiO ₂ , CaO, MgO, MnO, Na ₂ O, K ₂ O, P ₂ O ₅ , LOI. (Rock, Sediments, Soil etc.)	75		150		
		Trace elements	150		300		
3.	F-AAS	Au (50 ppb)	150		300		
4.	F-AAS	Cu, Pb, Zn, Ni, Co, Cd, Ag, Mn. (HNO ₃ dissolution) (% to ppm level) Ca, Mg, Na, K, Li, Cs, Rb, Ba, Sr, Al, Ti, Fe. (HClO ₄ dissolution) (% to ppm level)	150 100		150 100		
5.	HG-AAS(Continuous)	As, Sb, Se (ppm to ppb level)	50		100		
	HG-AAS (FIAS)		150		300		
6.	ISE	F (ppm level)	150		150		
7.	(i) Direct Mercury analyser (Solid)	Hg (5 ppb)	500		500		
8.	Fire Assay GF-AAS (Pb Button) Fire Assay- ICP-MS (NiS) PGE	Au, Pt, Pd. (upto ppb level) Pt, Pd, Rh, Ru, In	80 80		80 80		
9.	UV- Vis Spectrophotometer	W & Mo (upto ppm level) P ₂ O ₅ (upto ppm level)	150 150		150 150		
10.	(Inductively Coupled Plasma- Mass Spectrometry)	(i)Bi, Cd, Co, Cu, Nb, Pb, Th, U, Sc, Sn, In, Hf, Ta, Ge, Be, Zr. (upto ppb level). (ii) La, Ce, Pr, Nd, Eu, Sm, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Y (upto ppb level).	100 100		300 300		
11.	Water (Complete)	pH, EC, HCO ₃ ⁻ , Cl ⁻ , SO ₄ ⁼ , NO ₃ ⁻ , Ca ⁺² , Mg ⁺² , Na ⁺¹ , K ⁺¹ , PO ₄ , SiO ₂ .	25		25		
12.	Water	Trace by AAS/ ICP-AES (upto ppm/ ppb level)	100		100		
13.	Water	Hg, F, (upto ppb level)	100		100		
14.	Water	As (upto ppb level)	100		100		

Sl No.	Method/ Technique to be followed	Elements to be determined (Detection Limit within Parenthesis)	Existing Norms per Chemist	Proposed Norms per Chemist	Existing Norms per Instrument	Proposed Norms per Instrument	Comments
15.	Water (Partial)	pH, EC, HCO ₃ , CO ₃ , Cl, Ca, Mg, Na, K. (upto ppm level)	120		120		
<u>Coal</u>							
16.	Proximate	Ash, Moisture, V.M, Fixed Carbon (% level)	60		60		
17.	Ultimate	C, N, H, S, O, P including proximate analysis (upto ppm level)	25		25		
<u>Environmental</u>							
18.	Soil Extracts (Acid/ Water)	pH including all major ions	50		50		
		Traces by AAS/ AES (ppm/ ppb level)	100		100		
19.		N.K.P.B in soil (ppm/ ppb level)	25		25		
<u>Wet Chemical Analysis</u>							
20.	Bauxite (Complete)	Si, Al, Ti, Fe, Na, K, Ca, Mg, V, LOI (% to ppm level)	60		60		
21.	Bauxite (Partial)	Al, Ti, Fe, LOI (% ppm level)	120		120		
22.	Mn Ore (Complete)	Si, Al, Ti, Fe, Na, K, Ca, Mg, Mn, LOI (% to ppm level)	60		60		
23.	Mn Ore (Partial)	Fe, Mn (% to ppm level)	120		120		
24.	Fe Ore (Complete)	Si, Al, Ti, Fe, Na, K, Ca, Mg, S, P, FeO (% to ppm level)	60		60		
25.	Fe Ore (Partial)	Fe, Mn, Ti, Al (% to ppm level)	120		120		
26.	Lime Stone (Complete)	Si, Fe, Al, Ti, Ca, Mg,Na, K, P, LOI (% to ppm level)	40		40		
27.	Lime Stone (Partial)	Al, R ₂ O ₃ , Ca, Mg, LOI (% to ppm level)	120		120		
28.	Whole Rock	Si, Al, Ti, Fe, Na, K, Ca, Mg, Mn, P, S, LOI, FeO (% to ppm level)	10		10		
29.	Gravimetry	Sulphur (% level)	50		50		