Tender Reference: F. No. INST/12(304)/2021-Pur Dated 18.02.2022 (Tender ID: 2022\_INST\_674400\_1) for the Supply and installation of "High Resolution X-Ray Diffractometer (XRD) with Accessories"

		Tender Specification	Modified Specification
X-ray	Cooling	Internal Chiller for cooling the tube. Should have	Internal/External chiller for cooling the tube. Should
generator	Unit	cooling unit associated with it	have appropriate cooling unit associated with it.
Divergence Slit		Computer controlled programmable Automatic slit; 0.05	Computer controlled programmable Automatic slit;
		to at least 10 mm step size of 0.01 mm	0.05 to at least $10 \pm 3$ mm step size of 0.01 mm
Receiving Slit		Computer controlled programmable Automatic slit; 0.05	Computer controlled programmable Automatic slit;
		to at least 10 mm step size of 0.01 mm	0.05 to at least $10 \pm 3$ mm step size of 0.01 mm
Antiscatter Slit		Computer controlled programmable Automatic slit	Computer controlled programmable Automatic slit
		0.05~20 mm, 0.01 mm step.	0.05-10 mm or better, 0.01 mm step.
Soller Slit		2.5 And 5 deg (Incident and Receiving both). No	Must be 2.5 deg (Incident and Receiving both).
		realignment necessary after exchange	Additionally 5 deg may be provided for which no
			realignment should be necessary after slit exchange.
X-ray Detector		1D silicon strip detector with minimum 192 channels.	1D silicon strip detector with minimum 192
		All quoted channels should be fully functional	channels. All quoted channels should be fully
		Pixel Size: 75µm	functional
		Dynamic range of the detector: 10 lakh cps/line or	Pixel Size: 75µm
		more/Global range: 10 <sup>8</sup> cps or more	Dynamic range of the detector: 10 lakh cps/line or
		Angular Coverage: 3 deg (two theta)	more/Global range: 10 <sup>8</sup> cps or more
		Spatial resolution: 75 micrometer	Angular Coverage: 3 deg (two theta)
		Energy Resolution: < 1000 eV	Spatial resolution: 75 micrometer
		>99 % efficiency for Cu, Co and Cr radiation. To be	Energy Resolution: 1600 eV or better
		capable of detecting other radiation like Mo with >=	>99 % efficiency for Cu, Co and Cr radiation. To be
		40% efficiency	capable of detecting other radiation like Mo with >=
		Automatic absorber	40% efficiency

## **Corrigendum**

		Automatic absorber
Optional	>160 channels (up to 2400)	>160 channels (up to 2400)
Point Detector	Pixel Size: 75µm	Pixel Size: 75µm
	Dynamic range of the detector: 10 lakh cps/line or	Dynamic range of the detector: 10 lakh cps/line or
	more/Global range: $10^8$ cps or more	more/Global range: $10^8$ cps or more
	Angular Coverage: 2.5 deg (two theta)	Angular Coverage: 2.5 deg (two theta)
	Spatial resolution: 75 micrometer	Spatial resolution: 75 micrometer
	Energy Resolution: < 1000 eV	Energy Resolution: 1600 eV or better
	>99 % efficiency for Cu, Co and Cr radiation. To be	>99 % efficiency for Cu, Co and Cr radiation. To be
	capable of detecting other radiation like Mo with >=	capable of detecting other radiation like Mo with
	40% efficiency	>= 40% efficiency
	Automatic absorber	Automatic absorber
	Bidder should have installed minimum five numbers of	Bidder should have installed similar types of
	similar types of instrument in at least five govt.	instrument in at least two or more govt.
	organizations/R &D laboratories. Installations report to	organizations/R &D laboratories. Installations report
	be provided with tender.	to be provided with tender.

**Note:** Other specifications and T&C remains the same.