

**STEREO BINOCULAR MICROSCOPE WITH PHOTO MICROGRAPHIC ATTACHMENT**

NC-001383-12-R&D-NIS-5.04-01-18-19

Sr. No.	Specifications	Participating agencies	
		M/s. DHR Holding India Pvt	M/s. Vaiseshika Electron devices
	<b>Model quoted</b>	S9i Stereomicroscope	Zoom stereoscopic/video microscopes Type: 7004E-AE
1	Microscope manufacturers/brands: Olympus, Leica or Zeiss	This agency has quoted for the microscope from Leica manufacturer. Complies.	Not quoted for the required manufacturers or brands. Does not comply
2	<b>Optical System:</b> - Stereomicroscope with Greenough Optical System and fully apochromatic optical system. Focussing column with 500 mm or better.	Focusing column with 500 mm or better was asked. The agency is providing with 500 mm which is acceptable. Complies.	No mention of focusing column of 500 mm or better. Does not comply.
3	<b>Resolution</b> : - Upto 100 lp/mm or better with 12 mm depth of field and 37 mm or better object field.	Providing the 500 lp/mm with 12 mm depth of field and 37 mm object field is acceptable. Complies.	In catalogue It mentioned Field of View is 37 mm Which is impossible with any microscope manufacturer, it seems to be customized catalogue
4	<b>Zoom Ratio</b> : - 9:1 or better with total Magnification range of 6.1X to 55X or better	Complies	Complies
5		Complies	<p>Live Frame rate 31fps was asked in tender whereas quoted camera gives 3.3 fps in full frame which live frame rate and with ROI if we reduce field of view it gives up to maximum 36 fps hence not matching the specification. Further, we have asked for a computer with Windows 10. However, the camera seem to be compatible for windows XP or windows 7. Both are outdated systems Does not comply Offers either HDMI or</p> <p>Integrated camera has light distribution 100:0 hence provide more light during imaging where as quoted microscope has 50:50 light distribution in camera will provide poor quality image Specifications does not match.</p> <p>In the specifications biocular tube is clearly mentioned. As the specifications provided by the vendor in their brochure, it is mentioned that their biocular head does not have facility for camera port. Accepting a trinocular system will be a major deviation from the tendered specifications.</p>
6	<b>Eyepiece:</b> - Wide field paired eyepiece of 10x having F.O.V 23 mm or better with Diopter adjustment for both eyes	Complies	Complies
7	<b>Objective</b> : - Apochromatic objective of 1x with working distance 120 mm or higher	Complies	
8	<b>Transmitted Illumination</b> : - Transmitted light LED stage with black & white stage plate, rotatable knob for creating effects of light	Complies.	Transmitted light illumination with back and white stage plate is not available. Only provided Transmitted light illumination, no black and white stage plate is provided.
9	<b>Reflected light</b> : - Ring light for bright and uniform illumination, for 58 mm objectives, minimum 5000 K colour temperature, recommended working distance. 60-150 mm, with switchable segments and integrated control panel	Complies.	The ring light provided in the quotation works nicely with proper illumination up to 100mm but in specification it was asked 60-150mm working distance, there is no integrated control panel in ring light provided, hence not matching the specification. Further, the quality guarantee of 1 year on ring light for stereo is very vague. Does not comply.
10	<b>Essential:</b> - Minimum one years warranty and after sales service.	Complies.	Complies.
11	<b>Computer &amp; UPS</b> : - A Branded Computer (Dell/HP) with following specification needs to be supplied: Core i5- 7500T / 8 GB RAM / 1 TB HDD / 2 GB DDR5 Graphics Card, / Dvd writer / Windows 10. UPS with 30 minute back up should be supplied.	Providing HP workstation and UPS. Complies.	Could not find mention and specifications of computer and UPS. Computer specification asked windows 10, where as the quoted camera required Windows XP operating, which outdated and not available in the market. Further, it seems camera specification is old which has live frame rate 3fps at full field of view.
12	<b>Monitor</b> : - Full-HD LCD-Monitor 24" 1920x1080 Connections: VGA (D-Sub), HDMI, DisplayPort, 2-port USB-HUB(UP 1 x USB 2.0 / DOWN 2 x USB 2.0) should be provided	Complies.	Could not find mention and specifications or details of monitor. Required computer, UPS and monitor are essential for functioning of the stereomicroscope system and imaging to maintain the standard for high quality publications.

**RECOMMENDATIONS:**

The technical committee evaluated the specifications tendered and compared with those submitted by above two parties. The specifications provided by M/s DHR Holding Pvt Ltd match the required specification published in our tender. There several concerns with the specifications, model, and details of the items provided by M/s Vaiseshika Electron devices. A detailed comparison and compliance is given above. Further, we have visited the websites of both the manufacturers. The Leica S9i microscope is a standard product and its information is widely available on the internet. The Leica stereozoom microscopes are extensively used for neuroscience work in the world class research laboratories. We could not find any reference in the high impact neuroscience journals or on the web about the Vaiseshika 7004E-AE microscope. Although, they have 7004E series other models listed on their website, there is a dramatic difference with the one that they have quoted here. The technical committee therefore recommended the procurement of stereozoom microscope quoted by M/s DHR Holding Pvt Ltd.

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