

**Technical Specification For Camera And Software For Recording And  
Analysing Zebrafish Behaviour**

S.No	Description	Complied (Yes/No)	Catalogue No./Pg. No.	Remarks if any
<b>Technical Specifications</b>				
1	Windows 10 compatible software should enable automatic tracking of animals and also automatic quantification of behaviour with respect to frequency, latency, duration, velocity, trial duration, in zone , distance to zone, mobility, proximity, their mean, medians and statistical deviations with the help of a GigE camera. It should also facilitate the batch acquisition and analysis e.g. in overnight conditions.			
2	The system should be independent of the animal type. Be useful for all types of fishes (observable from the camera), larvae (e.g Zebrafish larvae in 96 titer plates ) in all types of in-house situations.			
3	Software to allow correction of missing and incorrect samples			
4	Should have built-in video tutorial			
5	The system should be robust to accommodate diverse lighting conditions and variable contrast - Data acquisition methods like grey scaling, static subtraction, dynamic subtraction, differencing, colour making and pixel change			
6	The arenas should be freely definable and it should be possible to copy and paste multiple arenas faithfully in case of small multiple arenas also.			
7	The software should allow behaviour analysis under low light and IR conditions and of multiple adult fishes in 1 arena.			
8	The system should have the capacity to analyse behaviours from multiple animals, in multiple arenas. Distance between subjects, proximity, body contacts, Relative movement should be easily reportable in multi-animal situations.			
9	Track smoothening features like Lowest, Maximum distance moved and minimum distance moved, should be available to remove unwanted data. The system should have the capability to automate experiment protocols involving the control of external hardware like lighting, food dispensers etc.			
10	The data selection should allow Nesting data over behaviour, time binning etc. The data visualisation should allow post-acquisition from video file and live data should also be possible. The data visualisation			

	and presentation should include graphs, plots and heat maps.			
11	It should be possible to customize data profiles wrt the need of the user without requiring devising of specific macros and other programs separately.			
12	Visualization of all data and video in one synchronized view, with built-in screen recording option for presentation purposes			
13	Visualization of multiple tracks in three dimensions, with colour as an indicator of speed or other dependent variables			
14	Heat maps visualization			
15	Suitable Gig-E monochrome camera			
16	Suitable colour camera for studying social interaction			

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the Above points with document proof as required. Failing which bidders will be technically disqualified)