



ROTAROD (ACCELERATION MODE)

To evaluate drug effects
on motor coordination,
balance and motor learning
in rodents





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Rotarod test is widely used to evaluate the effect of drug on motor coordination, balance and motor learning in rodents. The principle of this test is that rats or mice are first trained to walk on a rod rotating at a certain speed. Once the animals have learned this, the effect of a test-compound on their motor performance is evaluated. Animals experiencing impaired motor coordination are unable to cope with the rotating rod and will drop off when the rotation speed exceeds their motor coordination capacity. When the animal drops from rod safely into its own lane, the time latency to fall is automatically recorded.

Normal Mode:

Fixed speed selectable from 0.1 to 80rpm can be set.

Acceleration Mode I:

User can set the speed to be achieved in selected acceleration time starting from 0 rpm. For example, if user sets End speed as 40 and acceleration time as 60 sec then, rotor will start from 0 rpm; individual lane timers will also start same time and rotor will reach 40 rpm speed in 60 seconds. Once rotor achieves 40 rpm, it will continue at 40 rpm up to the cutoff time.

Features :

- Same instrument can be used for mice as well as rat just by changing the rotor.
- Five compartment model.
- Three modes of operation (Normal /Acceleration 1/ Acceleration 2).
- Animal selection facility (Mice/Rat).
- Forward & reverse direction of rotation.
- Facility of compartment coding (001 to 999).
- Individual lane timers (0-999.9sec) with resolution of 0.1s.
- Precise data of falling time, falling speed and distance travelled.
- Electronic rod speed adjustment- constant speed (0.1 to 80.0 rpm).
- Password protected software and admin features.
- Software for data collection & report generation.
- Calibration report generation facility in the software.
- Graphical presentation of data.
- Provision to add experiment Title & comment.
- Data can be converted to excel & Pdf file for further analysis.

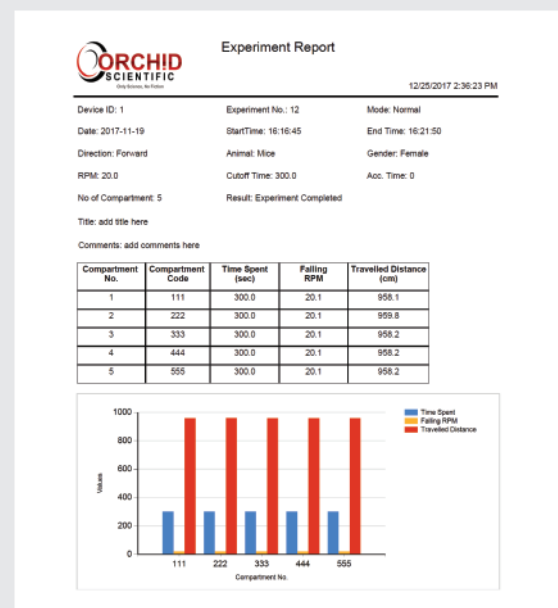
Acceleration Mode II :

User can set the speed to be achieved in selected acceleration time starting from 0 rpm. Lane timers will start at the time when rotor achieves the speed of 1/10th of the End Speed. As the animal falls, time measurement of the corresponding lane will stop.

For example, if user sets End Speed as 40 and acceleration time as 60 sec then, rotor will start from 0 rpm and will achieve 1/10th of End speed as 4rpm. Rotor will keep rotating at 4rpm and as user selects Start key, individual lane timers will start and rotor will reach 40 rpm speed in 60 seconds. Once rotor achieves 40 rpm, it will continue at 40 rpm up to the cutoff time.

Parameter	Mode		
	Normal	Acceleration I	Acceleration II
Speed	0.1-80rpm (selectable fixed)	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80 rpm	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80 rpm
Acceleration Time	N.A.	60, 120, 180, 240, 300 sec	60, 120, 180, 240, 300 sec
Cut Off Time	1.0 sec to 999.9 sec	301.0 sec to 999.9 sec	301.0 sec to 999.9 sec
Parameters Recorded	Date, Mode, Test number, End speed, Acceleration time, Start and End time, Falling speed, Time spent on rotar, Distance travelled.		

Software Report Formats :



System Specification & Models :

Specifications	Model		
	RR02-M	RR02-R	RR02
Animal	Mouse	Rat	Mouse & rat
Number of lanes	5	4	5
Rotor Speed Accuracy	±1.0 rpm		
Rotor Speed Resolution	0.1 rpm		
Falling Time	0-999.9sec (resolution-0.1sec)		
Distance Travelled	0.1 cm to 99999.9 cm		
Rotor Diameter	30mm	60mm	Mouse: 30mm Rat: 60mm
Lane Width	57mm	87mm	Mouse: 50mm Rat: 76mm
Falling Height	180mm	320mm	Mouse: 225mm Rat: 240mm
Lane Separator Diameter	250mm	310mm	290mm
Overall Dimension (LxWxH)	580mm X 300mm X 465mm	580mm X 310mm X 510mm	580mm X 300mm X 520mm
Display	4.3 inches TFT, Touch screen		
Material of Construction	Acrylic		
Power Requirements	220/230V AC 50Hz 110/120 V AC 50-60Hz*		
PC Connectivity	RS232		

* Needs to be specified in order information

Ordering Information :

Model	Accessories
RR 02	Basic instrument-1 Mice/Rat rotor as per model selected Tools for assembling Software for data transfer RS232 Cable With Converter

*** Note : Orchid's continuing product development makes specifications subject to change without prior notification.**



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Contact US

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