

RotaRod 大小鼠滾輪



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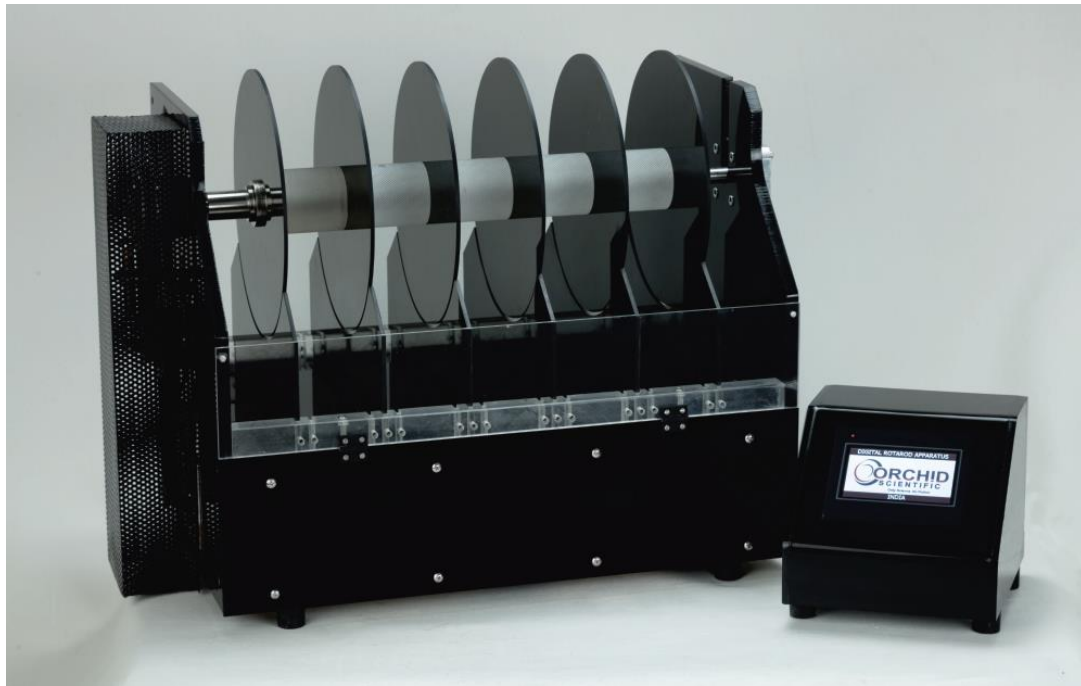
滾輪實驗

- 1956年，Dunham和Miya提出，測試化合物誘導的骨骼肌鬆弛可以通過測試小鼠或大鼠留在旋轉棒上的能力來評估。隨後，許多研究人員使用這種實驗方式強制運動活動。
- Rota-Rod提供了一種簡單的方法來測試嚙齒動物的運動功能。可以通過測量動物在旋轉滾筒上行走的時間來評估藥物施用，中樞神經系統損傷或疾病對運動協調/疲勞的影響。

https://www.youtube.com/watch?v=TDJZ_SmGwQc



大小鼠通用型滾輪 ORCHID RR02



特點:

- 大小鼠不同滾軸 Mouse:30mm
Rat:60mm
- 大小鼠不同間距:Mouse:50mm
Rat :75mm
- 掉落高度不同:Mouse:20cm
Rat:21.5cm
- 5條跑道
- 轉速範圍:1~80rpm
- 包含紀錄分析軟體



主機操作介面



	Password
Main Menu Login	1234
RPM calibration Login	5678



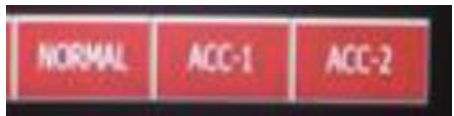
新實驗 New EXP



跑道數
 動物:Rat or Mouse
 SEX: Male or Female
 方向:正轉或反轉



Normal Mode-等速模式



RPM:設定轉速 1.0~80rpm
CUT OFF Time:最長時間



STAR	15 / 05 / 17	16 : 24 : 37	DIRECTION	FWD	
EXPERIMENT NO.	1		MODE	NORMAL	
ANIMAL	RAT	SEX	FEMALE	NO OF COMPARTMENT	
C. NO	C1 ON	C2 OFF	C3 OFF	C4 OFF	C5 OFF
CODE	001	002	003	004	005
TIME	002.1	000.0	000.0	000.0	000.0
RPM	54.3	00.0	00.0	00.0	00.0
DIST(cm)	00012.5	00000.0	00000.0	00000.0	00000.0

BACK ABORT SAVE



AAC-1 加速模式-1



速度從0加速到END RPM
 END RPM:10~80 rpm
 AAC Time:60~300 s
 Cut OFF Time:301~999.9s
 所有動物掉落後停止



ACC-2 加速模式-2



速度從0加速到END RPM
 END RPM:10~80 rpm
 AAC Time:60~300 s
 Cut OFF Time:301~999.9s
 Start RPM:1/10 End RPM
 所有動物掉落後停止



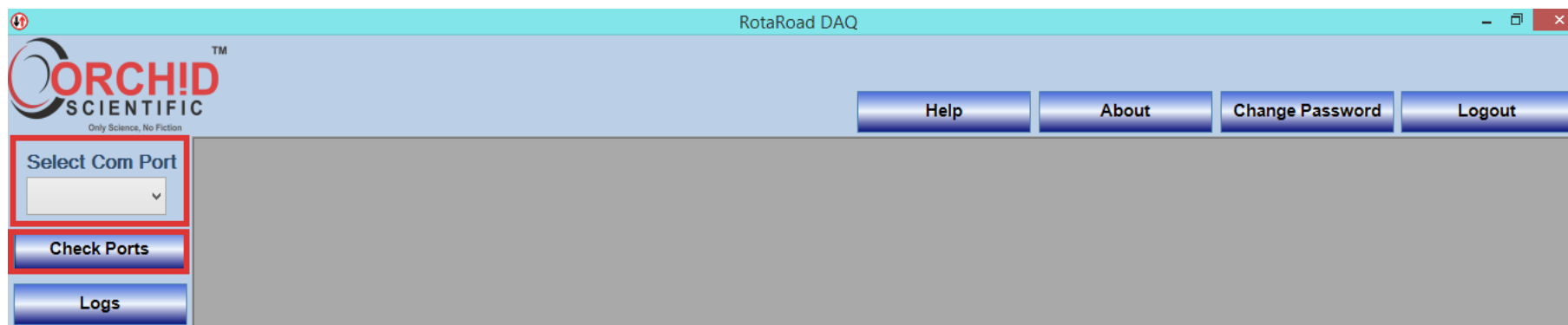
RotaRod 軟體 登入

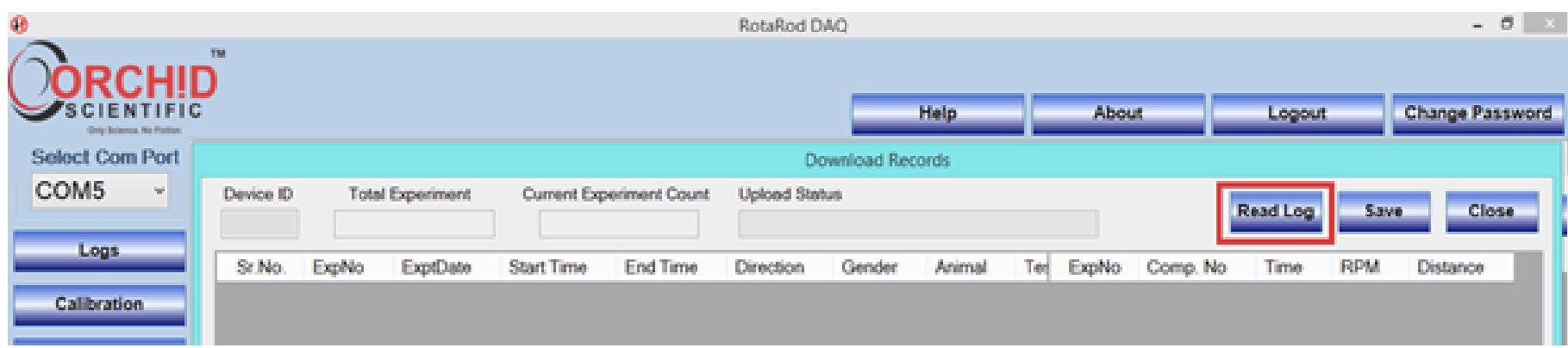
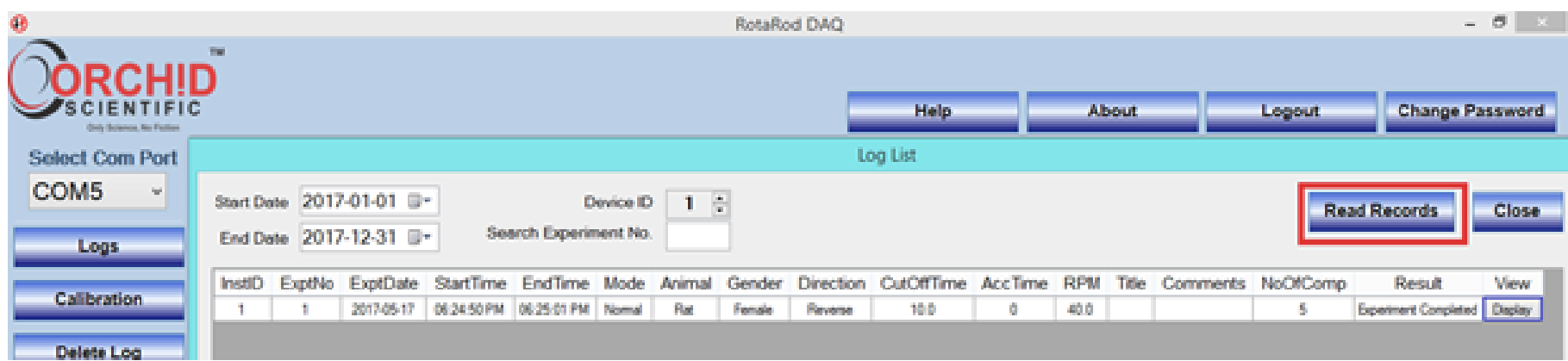
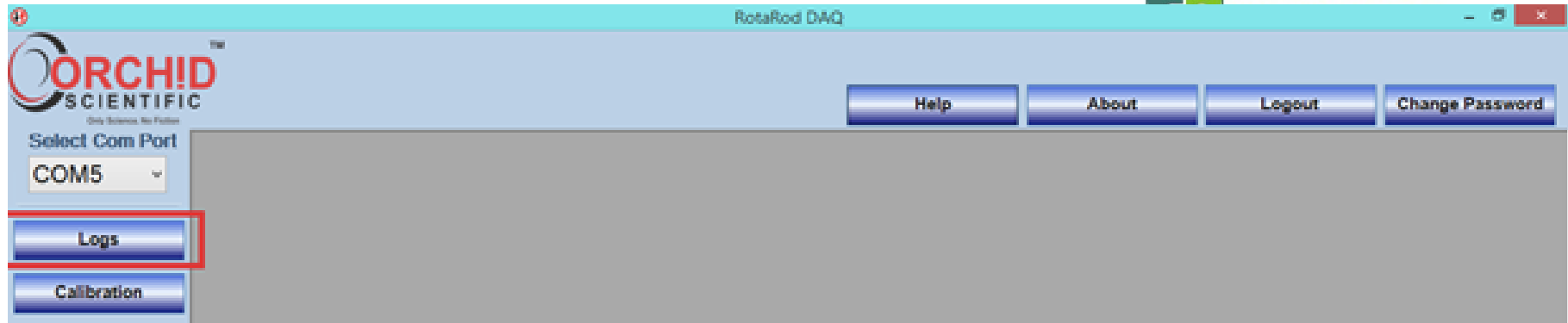
	Login Rights	ID	Password
Login	admin	admin	admin
Delete logs	--	--	7600



選擇COM Port

COM 4







讀取裝置內的數據

ORCHID SCIENTIFIC

Select Com Port
COM5

Help About Logout Change Password

Log list

Download Records

Device ID	Total Experiment	Current Experiment Count	Upload Status
1	7	7	<input type="checkbox"/>

Read Log Save Close

Sr No	ExpNo	ExpDate	Start Time	End Time	Direction	Gender	Animal	Tel	ExpNo	Comp. No	Time	RPM	Distance
1	1	2017-05-24	11:16:02	00:00:00	Reverse	Female	Stat		1	1	38.1	20.0	0.0
2	2	2017-05-24	11:22:10	11:24:10	Forward	Female	Stat		1	2	33.6	20.0	0.0
3	3	2017-05-24	11:24:57	11:24:10	Forward	Female	Stat		1	3	32.8	20.0	0.0
4	4	2017-05-24	11:26:06	11:24:10	Forward	Female	Stat		1	4	31.4	20.0	0.0
5	5	2017-05-24	11:26:42	11:27:12	Forward	Female	Stat		1	5	30.6	20.0	0.0
6	6	2017-05-24	11:27:33	11:28:06	Forward	Female	Stat		2	1	120.0	0.6	25.1
7	7	2017-05-24	11:30:32	11:30:06	Forward	Female	Stat		2	2	19.6	25.0	0.0
									2	3	26.0	25.0	0.0
									2	4	26.7	25.0	0.0
									2	5	29.7	25.0	0.0
									3	1	44.7	7.6	43.9
									3	2	9.3	1.8	0.0
									3	3	12.1	2.3	0.0
									3	4	0.0	0.0	0.0
									3	5	0.0	0.0	0.0
									4	1	17.3	15.4	0.0
									4	2	11.5	11.8	0.0
									4	3	6.1	8.8	0.0
									4	4	0.0	0.0	0.0

7 records uploaded.



點選每一筆數據

RotaRod DAQ

ORCHID SCIENTIFIC

Select Com Port: COM5

Start Date: 2017-01-01, End Date: 2017-12-31, Device ID: 1

Log List

InstID	ExptNo	ExptDate	StartTime	EndTime	Mode	Animal	Gender	Direction	CutOffTime	AccTime	RPM	Title	Comments	NoOf
1	1	2017-05-24	11:16:02 AM	11:24:10 AM	Normal	Rat	Female	Reverse	120.0	0	20.0			
1	2	2017-05-24	11:22:10 AM	11:24:10 AM	Normal	Rat	Female	Forward	300.1	60	10.0			
1	3	2017-05-24	11:24:57 AM	11:24:10 AM	Acc 1	Rat	Female	Forward	300.1	60	40.0			
1	4	2017-05-24	11:26:06 AM	11:24:10 AM	Acc 2	Rat	Female	Forward	300.1	60	40.0			
1	5	2017-05-24	11:26:42 AM	11:27:12 AM	Normal	Rat	Female	Forward	30.0	0	30.0			
1	6	2017-05-24	11:27:33 AM	11:28:06 AM	Normal	Rat	Female	Forward	30.0	0	40.0			
1	7	2017-05-24	11:30:32 AM	11:28:06 AM	Acc 1	Rat	Female	Forward	300.1	60	10.0			

Log Details

Device ID: 1, Expt. No.: 1, Expt. Date: 2017-05-17, Start Time: 18:24:50, End Time: 18:25:01, Mode: Normal, Animal: Rat, Sex: Female, Motor Direction: Reverse, Cut off Time (Sec): 10.0, Acc. Time (sec): 0, Set RPM: 40.0, No of Comp.: 5, Result: Experiment Completed

Compartment No.	1	2	3	4	5
Compartme Code	100	101	102	103	104
Time Spent (sec)	10.0	10.0	10.0	10.0	10.0
Remark	C.O.	C.O.	C.O.	C.O.	C.O.
Falling RPM	40.0	40.0	40.0	40.0	40.0
Travelled Distance (cm)	125.6	125.7	128.8	128.8	128.8

Chart Type: Column Line Pie

Select Parameter: Time Spent Falling RPM Travelled Distance

Save Graph Print Close

Admin 2017-05-21 17:13:33 Connecting to PLC



選擇圖表類型

Mode: Normal
Animal: Rat
Sex: Female
Motor Direction: Reverse
Cut off Time (Sec): 10.0
Acc. Time (sec): 0
Set RPM: 40.0
No of Comp.: 5
Result: Experiment Completed

Segment Color	Value
Blue (100)	10
Orange (101)	10
Red (102)	10
Dark Blue (103)	10
Grey (104)	10

Chart Type:
 Column
 Line
 Pie

Select Parameter:
 Time Spent
 Falling RPM
 Travelled Distance

Save Graph Print Close



儲存圖表

The screenshot displays a software interface for data analysis. On the left, a control panel shows experimental parameters: Cut off Time (Sec) 10.0, Acc. Time (sec) 0, Set RPM 40.0, No of Comp. 5, and Result Experiment Completed. The main area features a bar chart titled 'Time Spent' with a y-axis from 0 to 8. The chart shows five blue bars of equal height, approximately 7.5 units. To the right of the chart are radio buttons for 'Line', 'Pie', 'Falling RPM', and 'Travelled Distance'. Below the chart is a 'Save Graph' button, which is highlighted with a red box. A 'Save Graph image' dialog box is open in the foreground, showing the 'Desktop' folder selected in the left pane. The file name is 'graph time spent' and the save type is 'Bitmap Images (*.bmp)'. The dialog also has 'Save' and 'Cancel' buttons. On the right side of the interface, there are additional chart options: 'Chart Type' with 'Column' selected, and 'Select Parameter' with 'Time Spent' selected. Below these are 'Save Graph', 'Print', and 'Close' buttons.

Time Spent

8
6
4
2
0

Line
Pie
Falling RPM
Travelled Distance

Save Graph Print Close

Save Graph image.

This PC Desktop

Organize New folder

This PC
admin (space)
Administrator (s...)
Desktop
Documents
Downloads
Music
Pictures
user (acer)
Videos
Local Disk (C:)

All Maze Log Folder
database files
Desktop all
Desktop Data
Desktop Docx
KiCAD Help Files
LABEL WORKS
Metabolic cage

File name: graph time spent
Save as type: Bitmap Images (*.bmp)

Save Cancel

Chart Type
Column
Line
Pie

Select Parameter
Time Spent
Falling RPM
Travelled Distance

Save Graph Print Close



產生報告

Experiment Report

1 of 1 100% Find | Next

ORCHID SCIENTIFIC
Only Science, No Fiction

2017-05-21 17:18:20

Device ID: 1 Experiment No.: 1 Mode: Normal

Date: 2017-05-17 StartTime: 18:24:50 End Time: 18:25:01

Direction: Reverse Animal: Rat Gender: Female

RPM: 40.0 Cutoff Time: 10.0 Acc. Time: 0

No of Compartment: 5 Result: Experiment Completed

Title: enter experiment title here

Comments: add comment here

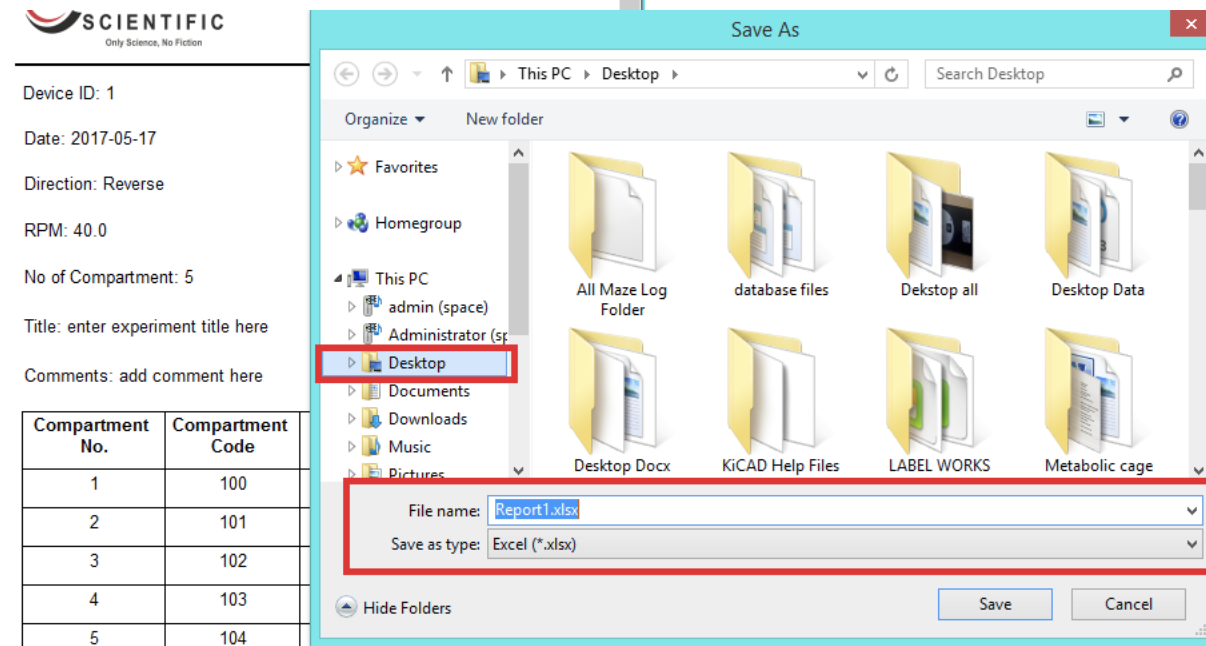
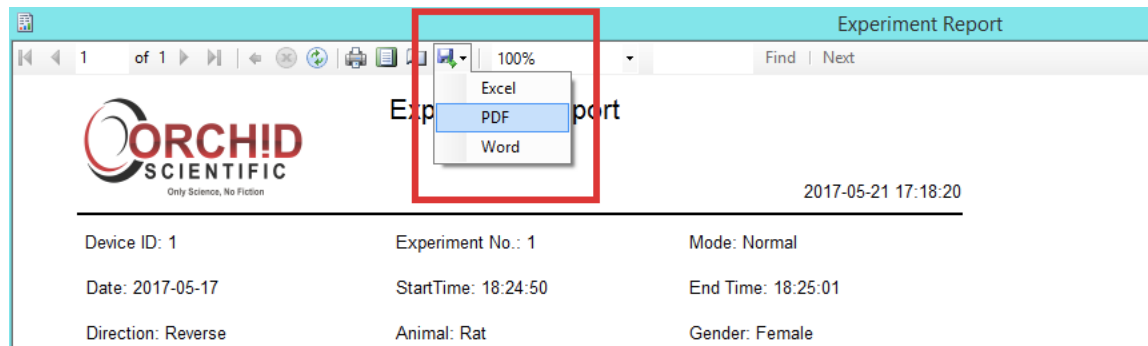
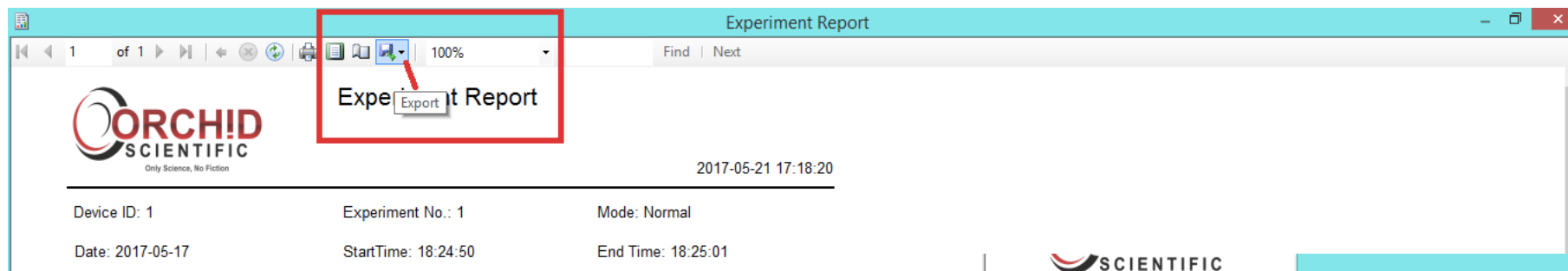
Compartment No.	Compartment Code	Time Spent (sec)	Falling RPM	Travelled Distance (cm)
1	100	10.0	40.0	125.6
2	101	10.0	40.0	125.7
3	102	10.0	40.0	128.8
4	103	10.0	40.0	128.8
5	104	10.0	40.0	128.8

Print Experiment Report

Activate Windows
Go to PC settings to activate Windows.

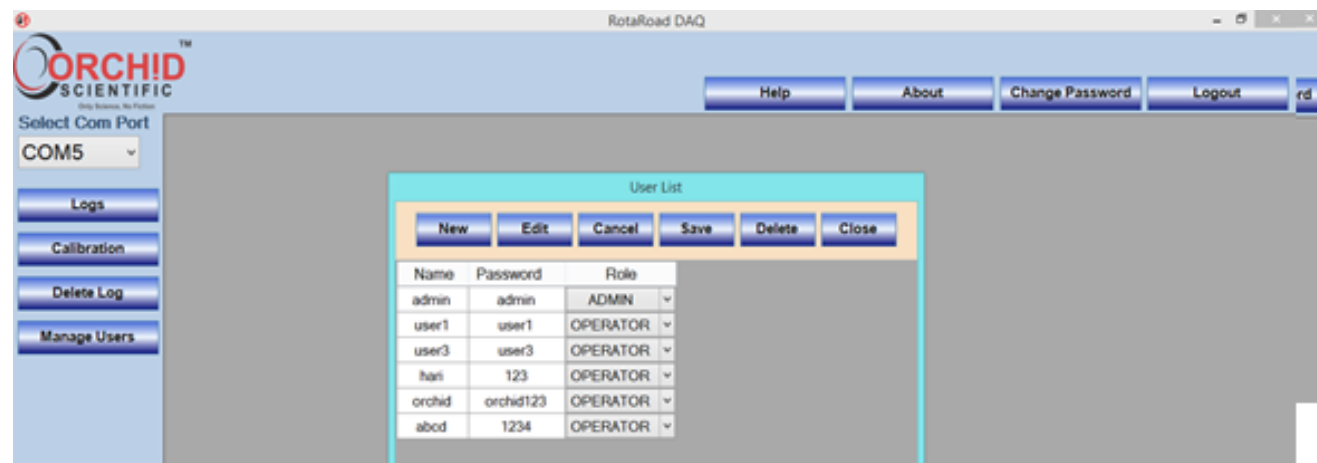
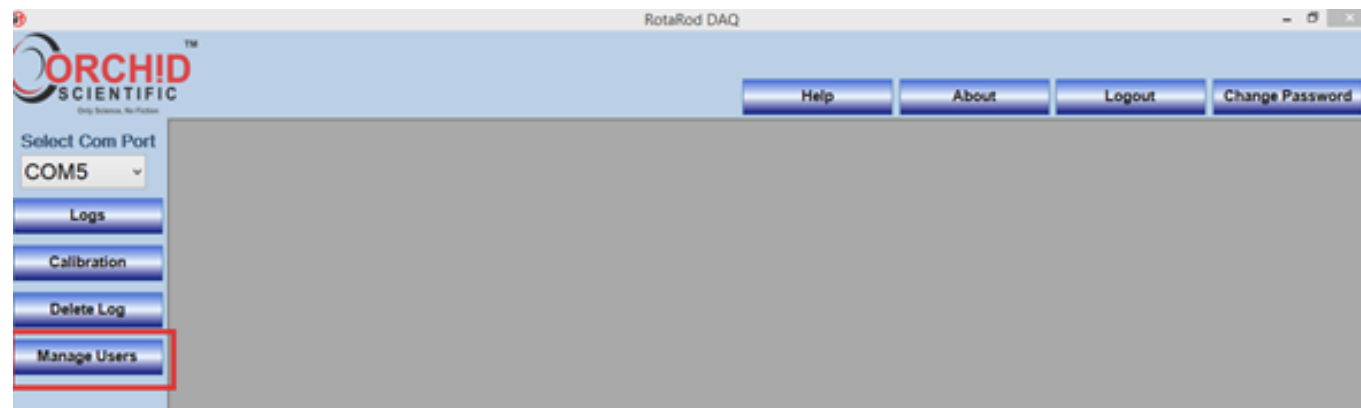


儲存/輸出報告





管理使用者





Thanks for your attention