

RotaRod 大小鼠滾輪



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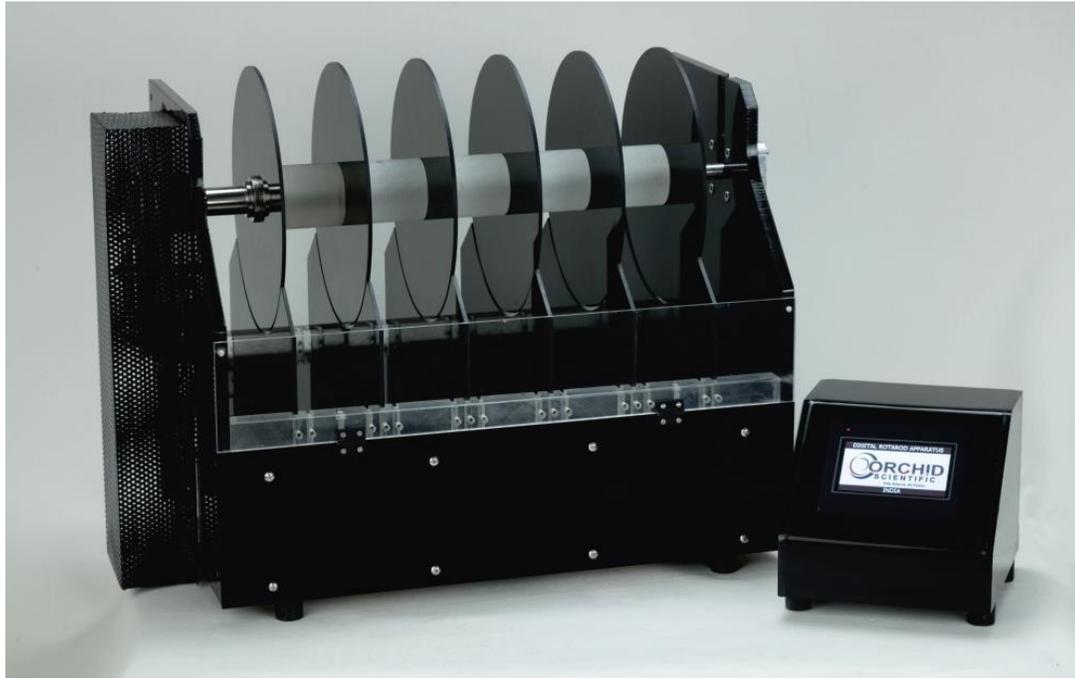
滾輪實驗

- 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

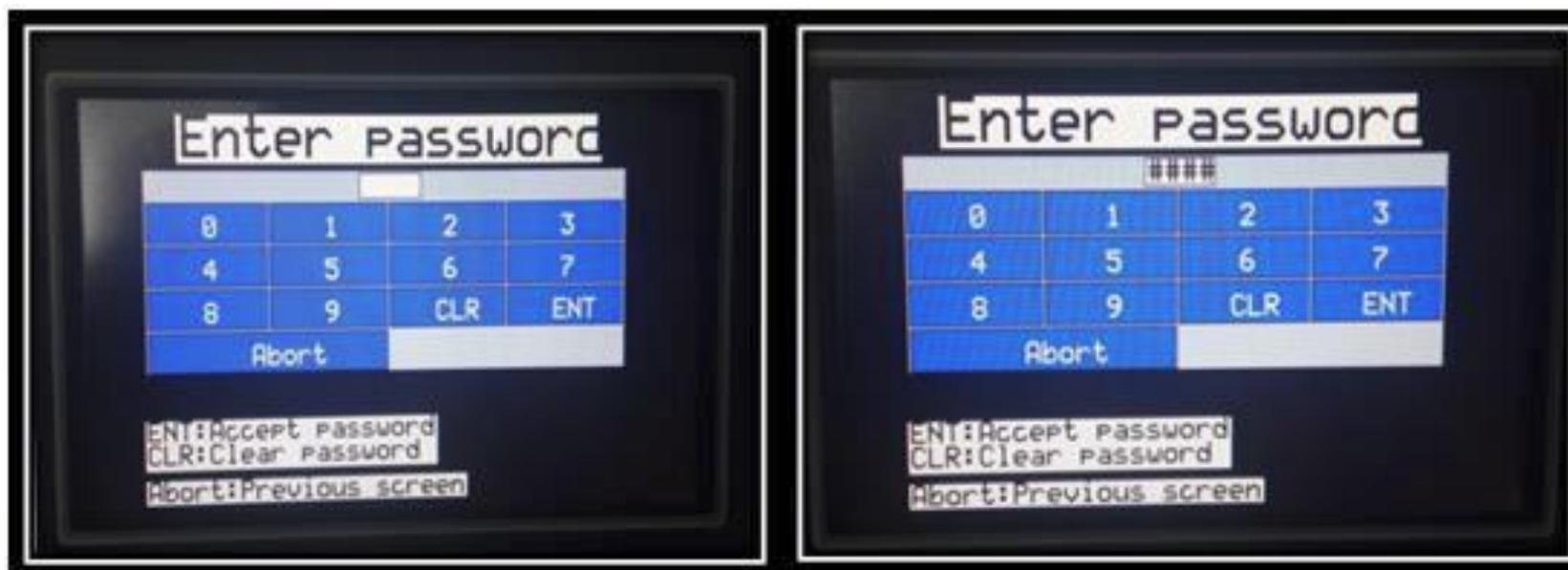


特點:

- 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 |



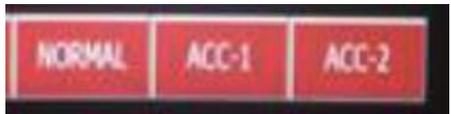
新實驗 New EXP



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

ORCH!D SCIENTIFIC
Only Science, No Fiction

TM User Rights

User name

Password

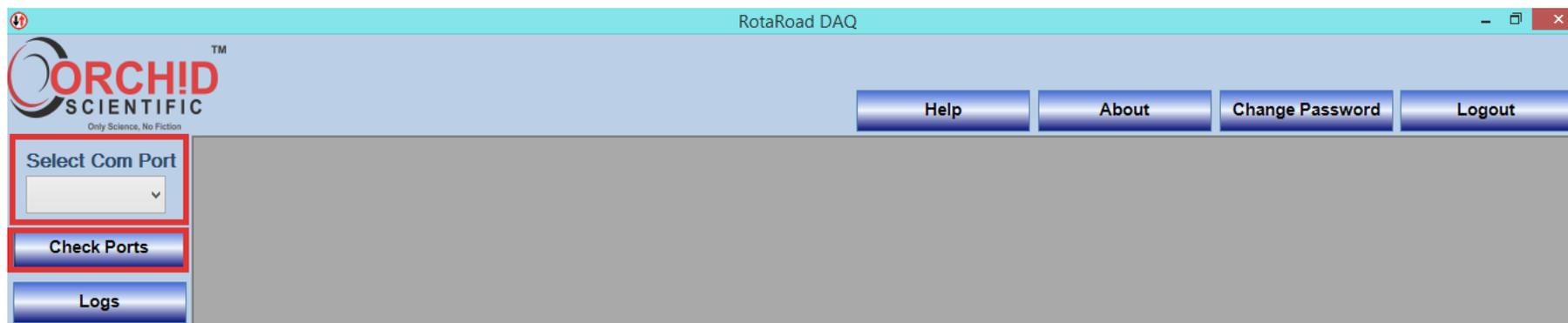
OK Cancel

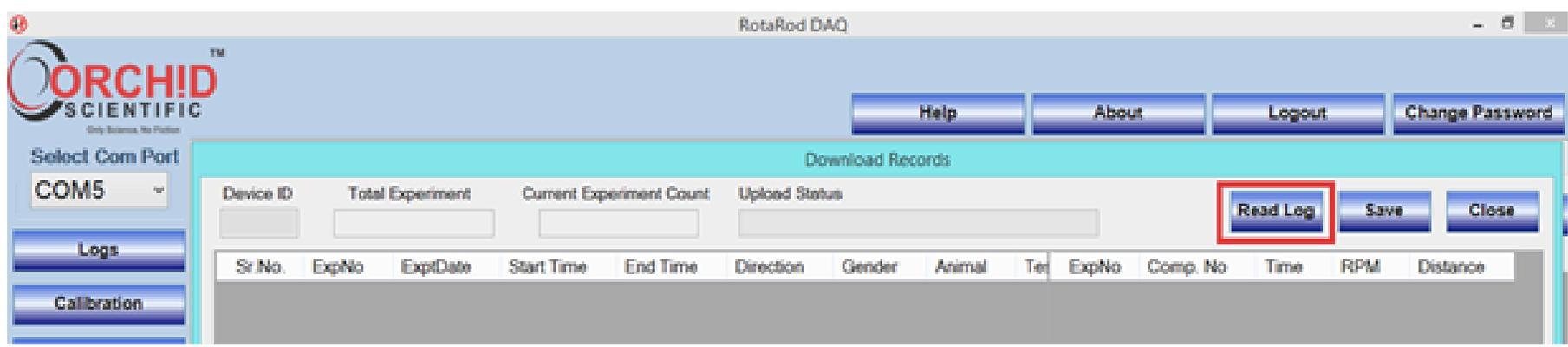
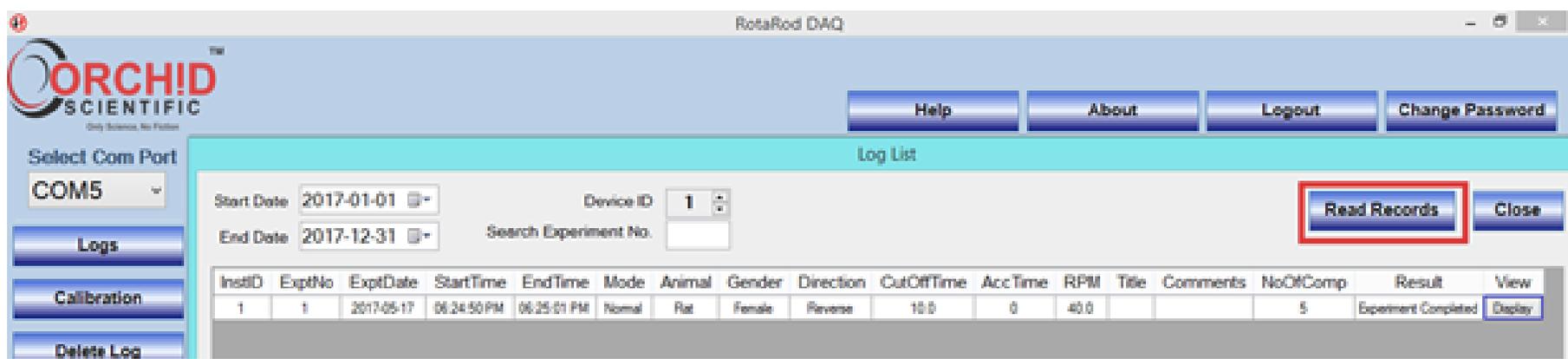
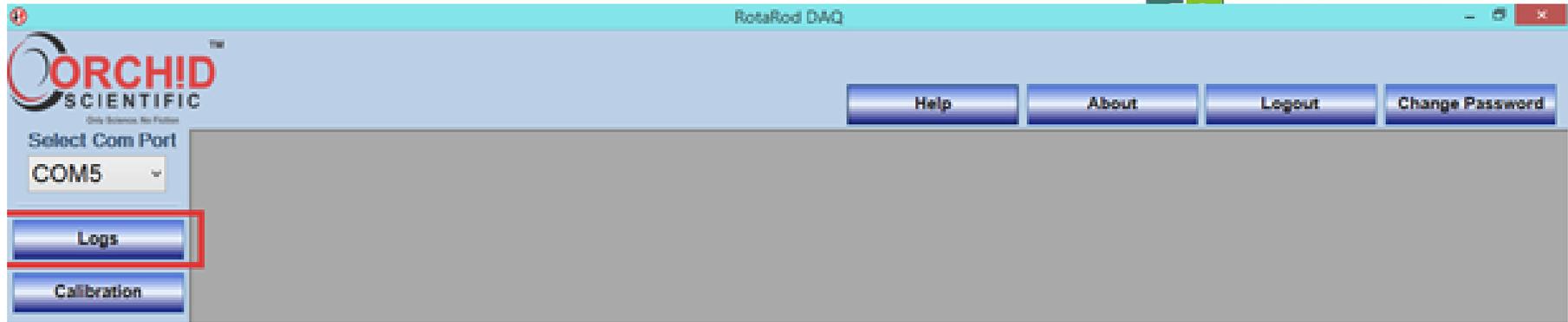
| | Login Rights | ID | Password |
|-------------|--------------|-------|----------|
| Login | admin | admin | admin |
| Delete logs | -- | -- | 7600 |



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

Cut off Time (Sec)
 Acc. Time (sec)
 Set RPM
 No of Comp.
 Result Experiment Completed

Time Spent

Line Falling RPM
 Pie Travelled Distance

Expt. Date: 2017-05-
 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 Com

Save Graph image.

This PC > Desktop > Search 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)

Chart Type
 Column
 Line
 Pie

Select Parameter
 Time Spent
 Falling RPM
 Travelled Distance



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

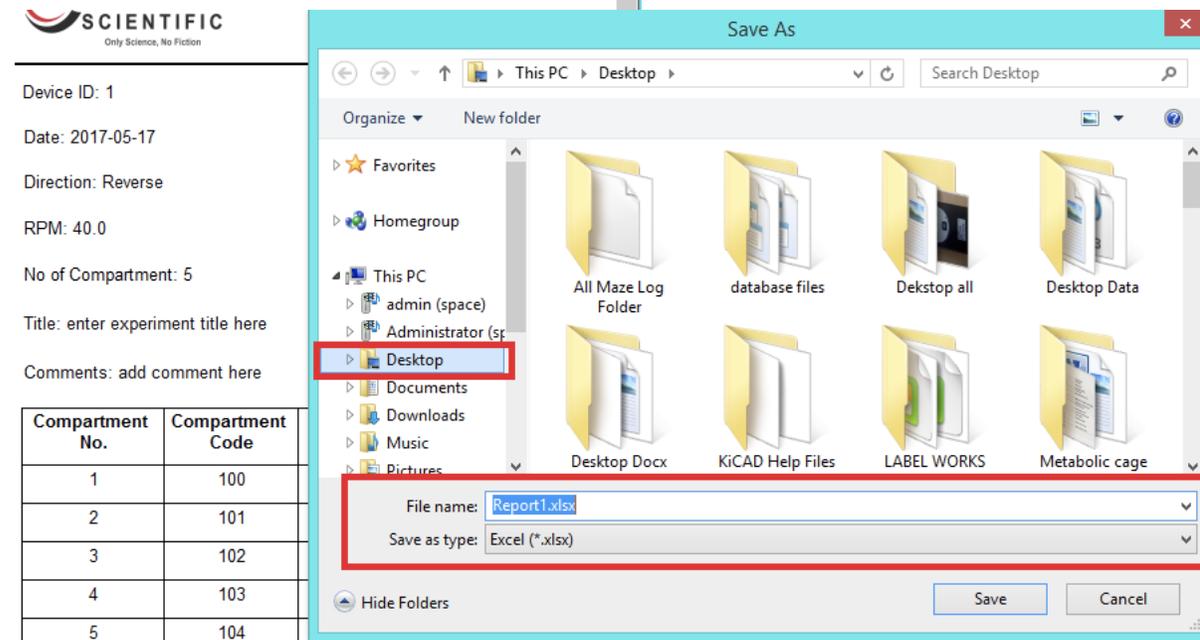
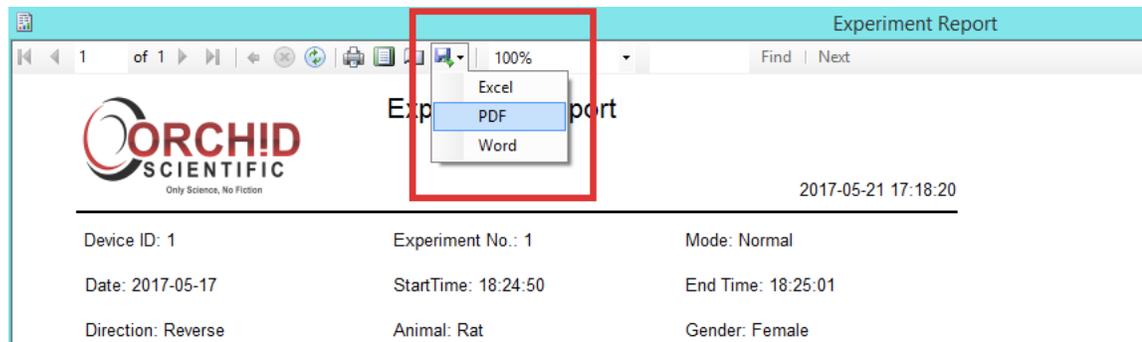
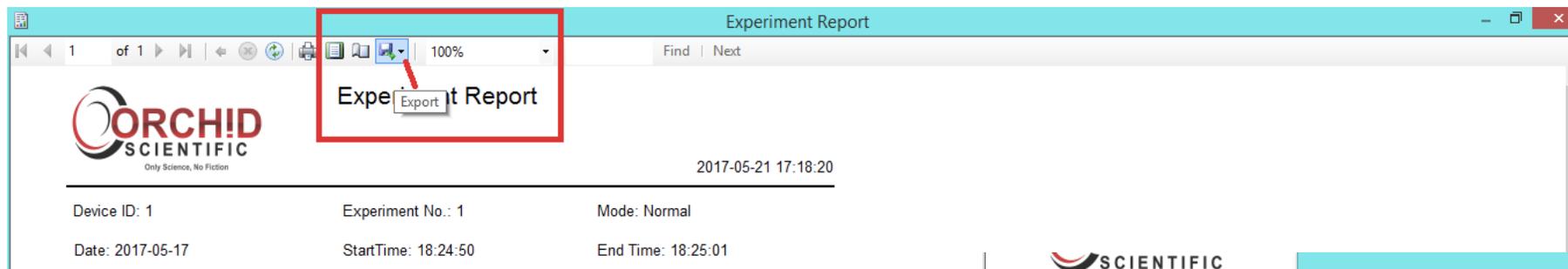
| Compartment No. | Compartment Code | Time Spent (sec) | Falling RPM | Travelled Distance (cm) |
|-----------------|------------------|------------------|-------------|-------------------------|
| 1 | 100 | 10.0 | 40.0 | 125.6 |
| 2 | 101 | 10.0 | 40.0 | 125.7 |
| 3 | 102 | 10.0 | 40.0 | 128.8 |
| 4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

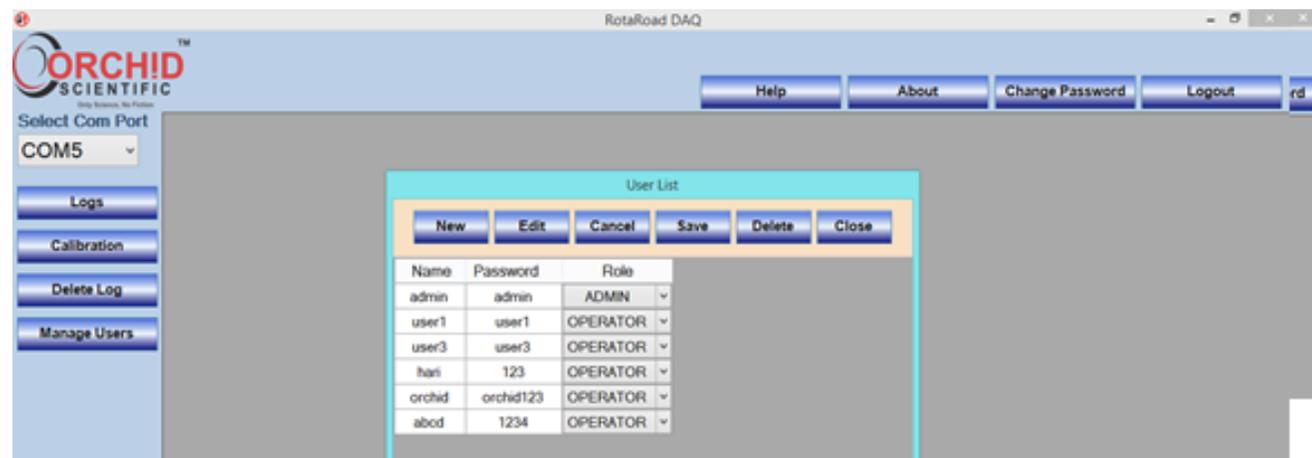


儲存/輸出報告





管理使用者





Thanks for your attention