

Product Overview

Sophisticated Life Science Research Instrumentation



TSE MOT Motility Meter

Home cage activity measurement

www.TSE-Systems.com ■



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◆ TSE MOT Motility Meter

In this easy-to-use activity monitor movement detection is based on sensitive force sensors integrated into a measuring platform that supports cages of any size. Changes in load caused by the animal's movements are converted into time-integrated pulses and accumulated in activity counters.

The user-friendly TSE Mot software records the counter totals at adjustable intervals. This measuring data provides a relative measure of the duration and intensity of the activity. The scanning interval can be defined by the operator.

In order to be able to use the Mot program the spread-sheet program MS-Excel must be installed on the computer. This allows the marked individual values to be transferred directly into an Excel worksheet in order for statistical calculations to be carried out.

System components

- ◆ N x sensor units for home cages,
- ◆ one or more control units,
- ◆ a special control interface, and
- ◆ the TSE Mot software package.

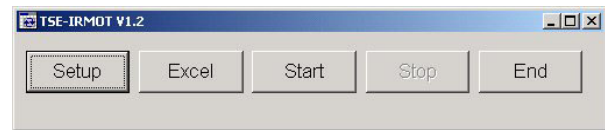


Control Unit

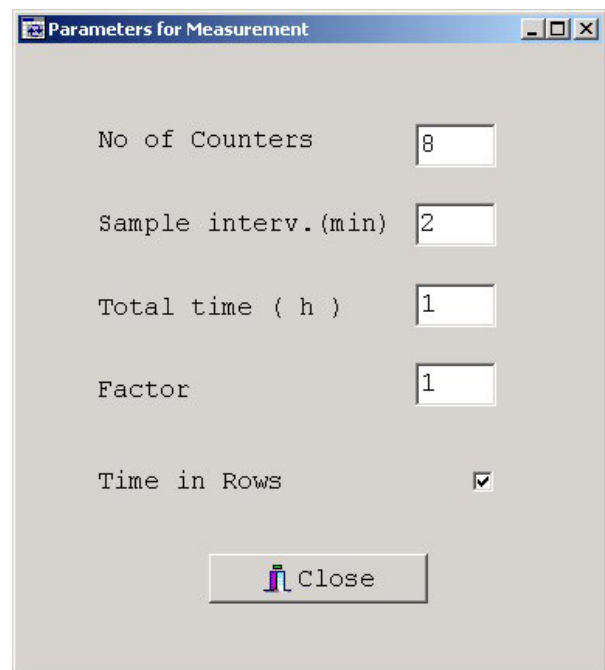
The system runs on a Pentium computer (at least PIII 700MHz) with the Windows operating system (98, NT, 2000 or XP – not 95!).

Preparing the trial

When the program has been started the following buttons are available on the main screen:



Now the control parameters have to be entered in the setup:



The following input fields are available for controlling the trial:

1. Under **Number of Counters** the number of sensors used in the trial is entered.
2. Under **Sample Interval** the scanning rate, i.e. the observation interval for the sensors, is entered. The movement counters are scanned every X minutes. The range is 1...60 minutes (in steps of 1 minute).
3. The **Total Time** can be entered between 0.1 and 720h (0.1 h = 6 minutes).
4. The values obtained during the measurement can be reduced by a certain factor with **Factor** in order to obtain a better display with high activities or large measuring intervals. A test should be carried out to determine a suitable value. Entries of 0.01-1.0 are possible.

5. **Time in Rows** refers to the arrangement of the data in the Excel table. The values of each counter can be stored in one line or one column.

Configuring an Excel sheet

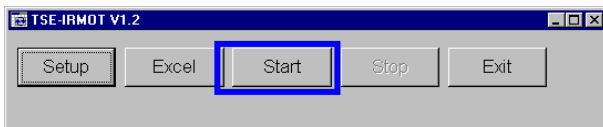
In order to guarantee maximum flexibility the measuring values are transferred into the Excel sheet without any additional information.

In order to characterize the measurement you can create any desired sheet with all the necessary **labels** to fill in animal and experimental identifiers, control parameters etc. and **equations**.

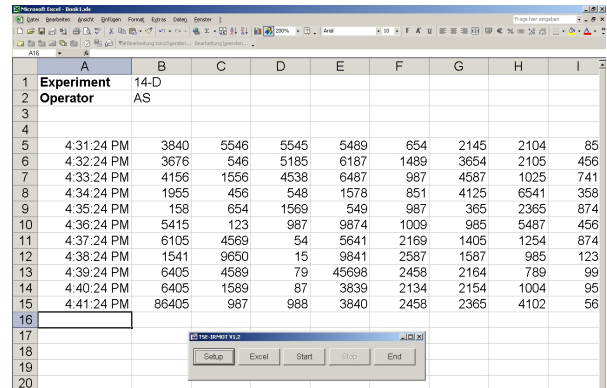
Carrying out a trial

Now the EXCEL link has to be established. Clicking on the **EXCEL** button automatically searches out Excel and starts it.

Now simply load the pre-defined Excel sheet and fill in all required descriptive parameters to characterize the following measurement.



Then start the measurement with the **START** button.



	A	B	C	D	E	F	G	H	I
1	Experiment	14-D							
2	Operator	AS							
3									
4									
5	4:31:24 PM	3840	5546	5545	5489	654	2145	2104	85
6	4:32:24 PM	3676	546	5185	6187	1489	3654	2105	456
7	4:33:24 PM	4156	1556	4538	6487	987	4587	1025	741
8	4:34:24 PM	1955	456	548	1578	851	4125	6541	358
9	4:35:24 PM	158	654	1569	549	987	365	2365	874
10	4:36:24 PM	5415	123	987	9874	1009	985	5487	456
11	4:37:24 PM	6105	4569	54	5641	2189	1405	1254	874
12	4:38:24 PM	1541	9650	15	9841	2587	1587	985	123
13	4:39:24 PM	6405	4589	79	45698	2458	2164	789	99
14	4:40:24 PM	6405	1589	87	3839	2134	2154	1004	95
15	4:41:24 PM	86405	987	988	3840	2458	2365	4102	56
16									
17									
18									
19									
20									

The measured values are now immediately transferred to the Excel worksheet according to the measuring interval frequency.

This is particularly useful when carrying out long-term trials, as it allows access to the trial data without interrupting data acquisition.

Evaluating the measuring data

The activity data can be used directly for further evaluation in the Excel program.

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