

Fully-Customized Operating Software of Arise EzMate 401 Automated Pipetting System Makes Drug Screening Experiments More Efficient

- Application note from Panlabs Biologics, Taiwan

Introduction

Panlabs Biologics is a leading organization that offers bio-transformation services and supplies a microbial NP library for new drug discovery. Panlabs Biologics also has been investing in advance high-throughput technologies to assist in drug screening. However, the process of drug screening is a repetitive and complicated liquid handling process which is tedious and time consuming, with many chances of making mistakes.

Using Arise EzMate 401 Automated Pipetting System will not only save more manpower and time, but also improve accuracy and precision by avoiding human errors. Most importantly, with fully customized operating software of Arise EzMate 401- EZ-Mate, it can even save the protocol setting time by directly importing the excel data and producing the report automatically. Arise EzMate 401 is a truly helpful system in drug screening.

Materials

• Consumables and Reagents

1. DMSO
2. 96-well plates
3. 96-deep well plates
4. 1.5 c.c. Eppendorf tubes
5. Customized chemicals

• Equipment:

4 units of Arise EzMate 401 with 1 channel Automated Pipetting Module (APM)

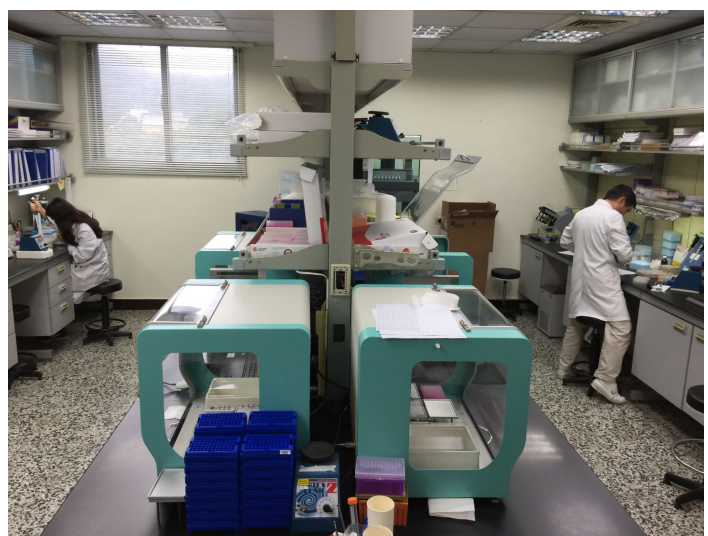


Figure 1. A total of 4 units of Arise EzMate 401 in the lab of Panlabs Biologics.

Methods

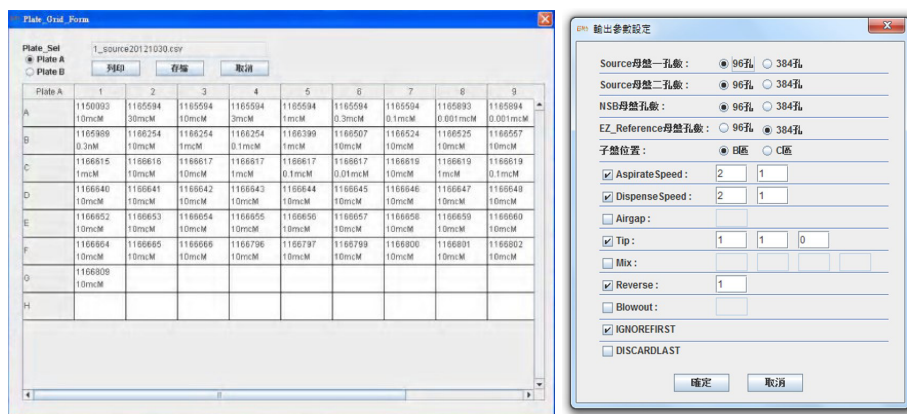
1. Enter the protocol setting data into the Excel file.

	A	B	C	D	E	F	G	H	I
1	well_id	well_vol	Compound_type_id	pl_id	plate_id	row_id	column_id	F_dilution	S_dilution
2	325134	104010	2		1	1	1		0 mcM
3	325134	104010	2		1	1	2		0 mcM
4	325134	104010	3		1	1	3		0 mcM
5	325134	104010	5		1	1	4		0 mcM
6	325134	104010	1	1166565	1	1	5		10 mcM
7	325134	104010	1	1166565	1	1	6		10 mcM
8	325134	104010	1	1166801	1	1	7		10 mcM
9	325134	104010	1	1166801	1	1	8		10 mcM
10	325134	104010	1	1166802	1	1	9		10 mcM
11	325134	104010	1	1166802	1	1	10		10 mcM
12	325134	104010	1	1166803	1	1	11		10 mcM
13	325134	104010	1	1166803	1	1	12		10 mcM
14	325134	104010	3		1	2	1		0.01 mcM
15	325134	104010	3		1	2	2		0.01 mcM
16	325134	104010	3		1	2	3		0.029999999999999999 mcM
17	325134	104010	3		1	2	4		0.029999999999999999 mcM
18	325134	104010	3		1	2	5		0.1000000001 mcM
19	325134	104010	3		1	2	6		0.1000000001 mcM
20	325134	104010	3		1	2	7		0.3000000012 mcM
21	325134	104010	3		1	2	8		0.3000000012 mcM

2. Open the customized operating software of Arise EzMate 401 – EZ-Mate and import the Excel file.



3. Check the chart and the parameters of protocol and press Run on the above photo.



Result and Conclusion

Arise EzMate 401 automated pipetting system is the best solution to handle complicated and repeated pipetting process for drug screening experiments. It will not only almost reduce the hands-on pipetting process, but also avoid human error arising from complicated experiments. Furthermore, with its fully customized operating software, it can save much more time from setting the protocol and just import the Excel file for running the program. The results will also be produced automatically after finishing the program which will make it possible to immediately check if the experiments were run correctly. This system certainly makes a great improvement on accuracy and precision, as well as save time in drug screening experiments.

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