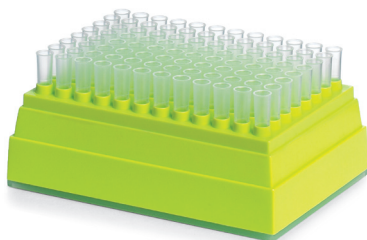


Thermo Scientific Finntip[®] Pocket Instructions for Use

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Thermo Scientific Finntip Pocket

The Thermo Scientific Finntip Pocket makes it possible to dispense nanoliter volumes with hand-held pipettes. The tips have a molded pocket inside to allow transfer of compounds suspended in DMSO into an assay.

General Methodology

- Aspirate compound from a source plate to the top of the pocket. The pocket fills with a specified amount of compound by capillary action. Dispense the remaining compound back into the source plate.
- Rinse below the pocket using DI water.
- Aspirate from an assay plate buffer/target solution, mix 3-5 cycles within the Finntip Pocket to release the compound from the pocket and to provide better mixing. Dispense into the assay plate.

Programming Finnpipette Novus 5-50 μ l for use with Finntip Pocket

The following programs can be stored to facilitate the use of Finntip Pocket.

Program 1: Loading the pocket

- Select MENU with the left button. Select PROGRAM with the scroll button, and press OK.
- Use the scroll button to select the program slot (1-9) under which the program will be stored, and press OK.
- Press EDIT, select PIPETTE, and press OK. Now the volume

is blinking. Select 17 μ l using the scroll button, and press OK.

- Now the aspirating speed is blinking. Select 3 using the scroll button, and press OK. Now the dispensing speed is blinking. Select 3 using the scroll button, and press OK.

Program 2: Rinsing the tip

- Use the scroll button to select the program slot (1-9) under which the program will be stored, and press OK.
- Press EDIT, select PIPETTE, and press OK. Now the volume is blinking. Select 5 μ l using the scroll button, and press OK.
- Now the aspirating speed is blinking. Select 5 using the scroll button, and press OK. Now the dispensing speed is blinking. Select 5 using the scroll button, and press OK.

Program 3: Dispensing into the assay buffer

- Use the scroll button to select the program slot (1-9) under which the program will be stored, and press OK.
- Press EDIT, select PIPETTE, and press OK. Now the volume is blinking. Select 15 μ l using the scroll button, and press OK.
- Now the aspirating speed is blinking. Select 3 using the scroll button, and press OK. Now the dispensing speed is blinking. Select 3 using the scroll button, and press OK.

Loading the pocket with source liquid

1. Place Finntip Pocket in the source liquid (compound in 100% DMSO).
2. Press and release the trigger once to aspirate 17 μ l using program 1.
3. Press and hold the trigger to dispense the excess back to the

source liquid.

4. Still holding the trigger, remove the tips from the source liquid and blot them completely onto a clean absorbent tissue. This is to empty the tip below the pocket from source liquid.

5. Release the trigger.

Rinsing the tip below the pocket

1. Place Finntip Pocket in the rinsing liquid (DI water).
2. Press and release the trigger once to aspirate the rinsing liquid below the pocket using program 2.
3. Press and hold the trigger to dispense the rinse liquid back to the rinse liquid plate or reservoir.
4. Still holding the trigger, remove the tips from the rinse liquid and blot them completely onto a clean absorbent tissue. This is to empty the tip from water.
5. Release the trigger.
6. Repeat the steps 1-5 two to three times.

Diluting and dispensing the source (compound) liquid

1. Place Finntip Pocket in the assay well filled with an aqueous assay buffer.
2. Press and release the trigger once to aspirate 15 μ l using program 3. Make sure that the buffer upper meniscus passes by the pocket.
3. Press and hold the trigger to dispense the assay liquid back to the assay plate.
4. Still holding the trigger, remove the tips from the assay liquid.
5. Release the trigger.
6. Repeat the steps 1-5 three to five times.

Accuracy and precision testing of Finntip Pocket

The accuracy of Finntip Pocket is $\pm 15\%$ (average of a rack of 96 tips). The CV should be below 6% across a rack of 96 tips.

Materials

- Oregon Green (Cat.no. D6145, Invitrogen); prepare ~100 µM Oregon Green in 100% DMSO
- PBS buffer, pH 7.2
- Black 384-well Thermo Scientific Microtiter microplates (Cat.no. 8255) or other untreated black microplates
- Thermo Scientific Multichannel Finnpipettes (1-10 µl, 5-50 µl, 30-300 µl)
- Thermo Scientific Finntip Pocket, Finntip 10, Finntip Flex 300

Preparing a standard curve

- Dispense 95 µl PBS buffer to the first column of a black 384-well microplate and 50 µl PBS buffer to the following eight columns.
- Add 5 µl of the ~100 µM Oregon Green solution to the first

column, mix by pipetting up and down and transfer 50 µl to the next column.

- Continue transferring 50 µl to adjacent columns. Note: Remove 50 µl from the last column to ensure that all wells contain 50 µl.
- Spin the microplate down for 1-2 minutes at 2000 rpm.
- Measure the fluorescence (RFU) using the filter pair ex 485/em 538, e.g. on Thermo Scientific Fluoroskan Ascent. Calculate the average RFU.
- The first column contains 2.5 µl Oregon Green/well, the next column 1.25 µl/well, etc.
- Prepare the standard curve by plotting the average RFU against the volume. Use only the smallest volumes, see Fig. 1 for an example.

Testing of Finntip Pocket

- Dispense the same ~100 µM Oregon Green solution with Finntip Pocket into 50 µl PBS buffer in a black 384-well Microtiter microplate (e.g. into 32 wells)
- Spin the microplate down for 1-2 minutes at 2000 rpm.
- Measure the fluorescence as described above.
- Determine the precision of the RFU values: $CV\% = 100 \cdot \text{standard deviation} / \text{average}$. The actual volume can be determined from the standard curve. Accuracy is the difference between the dispensed volume and the volume of Finntip Pocket (50 nl or 250 nl) and can be expressed as a relative value (acc%).

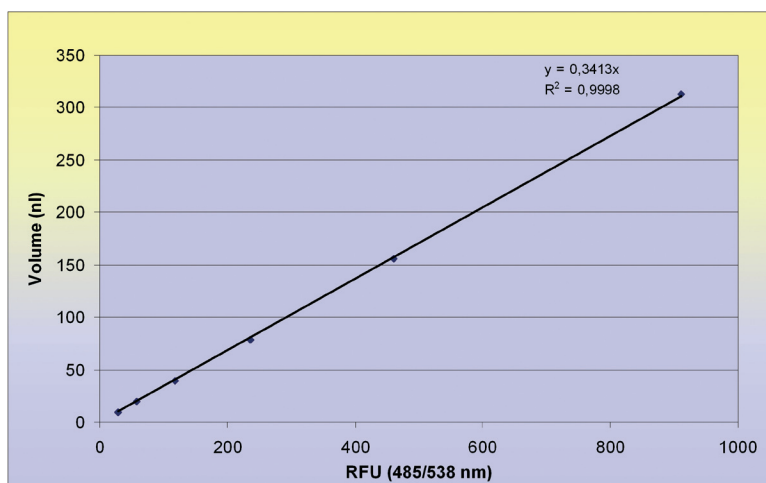


Figure 1. Standard curve for Finntip Pocket volume determination.

Ordering Information

Cat. no.	Description	Quantity
94035510	Finntip Pocket 50	10x96/rack
94035520	Finntip Pocket 50	1x96/rack
94035550	Finntip Pocket 250	10x96/rack
94035560	Finntip Pocket 250	1x96/rack



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