

Accelerate 384-Well Pipetting

How you can save 70% of your valuable time loading 384-well plates manually

Abstract

With the advent of the high-throughput screening approach, which is widely used in the pharmaceutical industry, the need for a microplate with a larger number of wells arose. The 384-well microplate was then developed and implemented as a consumable for drug development assays.

The manual transfer of 384 samples is relatively time-consuming, especially when samples from reaction vessels of another vessel format, e.g. 1.5/2.0 mL reaction tubes, are transferred to 384-well plates. In industry, however, maximum efficiency is essential in addition to maximum precision and sample safety.

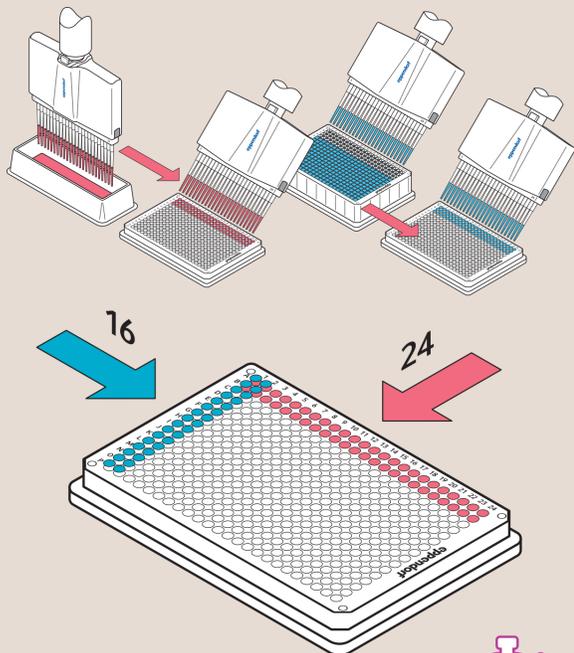
In this overview, we give you helpful tips and tricks for a maximum acceleration of your workflow when manually filling 384-well plates.



Tip 1a: Distribute liquid medium – 24 at once

The distribution of liquid medium into 384-well plates can be accelerated with 16- and 24-channel pipettes.

- > Ideally, use 24-channel pipettes to distribute master-mix, buffer or medium in 384-well plates
- > About **50% time-saving** with 16/24-channel compared to 8/12-channel pipettes



Be 2x as fast by using 16/24- instead of 8/12-channel pipettes

or

Tip 1b: Distribute liquid medium – with electronic pipettes in dispensing mode

With electronic pipettes, the distribution of liquid medium into 384-well plates can be even further accelerated.

- > **Example:** If 25 µL volume per well are dispensed with a 100 µL electronic 16/24-channel pipette, up to **80% time-saving** savings can be achieved compared to 8/12-channel pipettes.

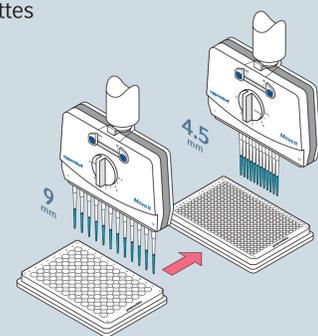


Be even 5x as fast as with 8/12-channel pipettes by dispensing with electronic 24-channel pipettes

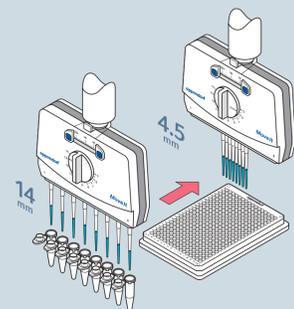
Tip 2: Move multiple samples simultaneously from one vessel format to another

Instead of pipetting 384 times, transfer up to 12 samples at a time into a 384-well plate.

- > Ideally, use 12-channel adjustable cone distance pipettes to move samples from 96-well plates and **save up to 70% time** compared to single-channel pipettes



- > Ideally, use 8-channel adjustable cone distance pipettes to move samples from 1.5/2.0 mL tubes to 384-well plates and **save up to 64% time** compared to single-channel pipettes



Be 3x as fast by using adjustable cone distance instead of single-channel pipettes

Summary



Get the maximum out

Here, the most efficient way to manually fill a 384-well plate is the combination of

- 1.: A 24-channel electronic pipette for loading the reaction liquid
- 2.: Multichannel pipette with adjustable tip spacing for transferring individual samples

Both combined, saves you up to 70% time.



Eppendorf solutions

Further information as well as the possibility to request a demo is available from Eppendorf under the links shown here:

> www.eppendorf.com/ready-set-pipette



> www.eppendorf.com/move-it

