

Overview

ReChargerTM by IonField SystemsTM removes DMSO that builds up in a TipCharger cleaning station as a result of cleaning pipette tips used to dispense DMSO-based samples. It is recommended that the following procedure be implemented every 5 to 10 cleaning cycles when routinely pipetting samples in 100% DMSO. The optimal ReCharger protocol frequency may vary by application as the solvent buildup is dependent upon both the DMSO concentration used and the volume pipetted. Users should visually verify the plasma integrity to determine an optimum cleaning routine. Contact [Ionfield Technical Support](#) for additional assistance if needed.

Quick Procedure Guide

- Ensure the TipCharger is switched on and positioned correctly on the deck of the liquid handler.
- Aspirate 2x the ReCharger volume to be dispensed.
 - See table 1 below
- Move to -6mm from the top of the TipCharger cleaning station @ 20% Z move speed.
 - Alternatively set a 1 second pause at the dispense height
- Dispense 1x ReCharger solution at 5 µl/sec.
- Pause in the TipCharger for 10 seconds.
 - If the liquid handler software does not allow for a pause at the dispense height, it may be necessary to add a mix command using a small volume at a very slow speed in order to allow the tips to stay in the plasma.
- Dispense 1x ReCharger solution at 5 µl/sec.
- Pause in the TipCharger for an additional 10 seconds.
- Exit the TipCharger and continue assay.

Aspirate and Dispense Volumes for ReCharger

TipCharger Model	ReCharger Dispense Volume	ReCharger Aspirate Volume
8-channel	8 µl	16 µl
96-channel	6 µl	12 µl
384-channel	4 µl	8 µl

Notes:

1. It is good practice to add a cleaning cycle of the TipCharger using the ReCharger solution at the start and end of each protocol.
2. The procedure described in this document will restore the cleaning station to optimal performance even if all plasma has been extinguished. The protocol may need to be run multiple times with a one minute delay between each repetition when plasma production in all wells has been compromised.
3. Loop functions of the liquid handling software may be utilized to automate the interval at which the ReCharger protocol is run within a specific protocol.
4. Reservoir covers are available from IonField Systems to reduce evaporation of ReCharger during extended runs.