

Materials List for:

Optimizing the Use of a Liquid Handling Robot to Conduct a High Throughput Forward Chemical Genetics Screen of *Arabidopsis thaliana*

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URL: <https://www.jove.com/video/57393>

DOI: [doi:10.3791/57393](https://doi.org/10.3791/57393)

Materials

| Name | Company | Catalog Number | Comments |
|------------------------------------|--------------------------|---|--|
| Keyboard | Local Provider | N/A | Used for protocol design and operating the Biomek FX |
| Mouse | Local Provider | N/A | Used for protocol design and operating the Biomek FX |
| Computer Screen | Local Provider | N/A | Used for protocol design and operating the Biomek FX |
| Computer | Local Provider | N/A | Used for protocol design and operating the Biomek FX |
| DIVERSet Diverse Screening Library | ChemBridge | N/A | Chemical library |
| Biomek Software | Beckman Coulter | N/A | Runs and designs the Biomek FX |
| Device Controller | Beckman Coulter | 719366 | Operates the water pump/tip washing station |
| Stacker Carousel Pendant | Beckman Coulter | 148240 | Manual operation of Biomek Stacker Carousel |
| Biomek Stacker Carousel | Beckman Coulter | 148520 | Rotary unit that houses all FX Stacker 10's |
| FX Stacker 10 | Beckman Coulter | 148522 | Elevator unit that houses components for screen |
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| Biomek FX | Beckman Coulter | https://www.beckman.com/liquid-handlers | Robot that performs the desired operations |
| Accuframe | Artisan Technology Group | 76853-4 | Frames arm to place components correctly |
| Framing Fixture | Beckman Coulter | 719415 | Centers arm in the Accuframe |
| Multichannel Tip Wash ALP | Beckman Coulter | 719662 | Washes the tips after the ethanol bath |
| Tip Loader ALP | Beckman Coulter | 719356 | Pneumatically loads tips onto the arm |
| Air Compressor | Local Provider | N/A | Provides air for pneumatic tip loading |
| MasterFlex Console Drive | Cole-Parmer | 77200-65 | Pump used to circulate water through the Multichannel Tip Washer |
| Air Hose | Local Provider | N/A | Provides air from air compressor to Tip Loader |

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| Water Hose | Local Provider | N/A | Provides water from 5 Gallon Reservoir to Tip Washer |
| Static ALP's | Beckman Coulter | Comes with Biomek FX | Supports equipment for the Screen |
| 5 Gallon Reservoir | Local Provider | N/A | Recirculates the dirty water from cleaning the tips |
| Grippers | Beckman Coulter | Comes with Biomek FX | Grabs and moves the equipment to the correct places |
| 96-Channel 200 µL Head | Beckman Coulter | Comes with Biomek FX | Holds the 96 tips used within the screen |
| AP96 P200 Pipette Tips | Beckman Coulter | 717251 | Used to make the screening library |
| 96 Well Flat Bottom Plate | Costar | 9018 | Aids in visualization of screen |
| 96 Well V-Bottom Plate | Costar | 3897 | Aids in storing of dilution library |
| AlumaSeal 96 Sealing Film | MedSci | F-96-100 | Seals for storage both the chemical library and dilution library |
| Plastic ziplock sandwich bags | Local Provider | N/A | Used to ensure a humid environment for screen |
| AP96 P20 Pipette Tips | Beckman Coulter | 717254 | Used in the dilution library creation |
| Growth Chamber | Percival | AR36L3 | Germinates seeds for phenotypic visualization |
| Spatula | Local Provider | N/A | Holds seeds to add into wells where liquid seeding failed seed adequately |
| Toothpick | Local Provider | N/A | Pushes seeds from spatula to wells |
| Murashige and Skoog Basal Salt Mixture | PhytoTechnology Laboratories | M524 | Add to MS media mixture |
| MES Free Acid Monohydrate | Fisher Scientific | ICN19483580 | Added to MS media to decrease pH |
| Agar Powder | Alfa Aesar | 9002-18-0 | Increases thickness of media to support seed suspension |
| 5M KOH | Sigma-Aldrich | 484016 | Increases pH to adequate levels |
| 1L Media Storage Bottle | Corning | 1395-1L | Holds enough media for a screen |
| Polypropylene Centrifuge Tubes | Corning | 431470 | Sterilizes seeds prior to vernalization |
| pH Probe | Davis Instruments | YX-58825-26 | Used for making media |
| ALPs (Automated Labware Positioners) Users Manual | Beckman Coulter | PN 987836 | Aids in setting up the accompanying equipment for the Biomek FX |
| Biomek 2000 Stacker Carousel Users Guide | Beckman Coulter | 609862-AA | Aids in setting up the Stacker Carousel |
| Biomek FX and FX ^P Laboratory Automation Workstations Users Manual | Beckman Coulter | PN 987834 | Used to frame the Multichannel Pod |
| Biomek FXP Laboratory Automation Workstation Customer Startup Guide | Beckman Coulter | PN B32335AB | Used to aid in setting up the Biomek FX |
| Biomek Software User's Manual | Beckman Coulter | PN 987835 | Used to set up and understand the Software |