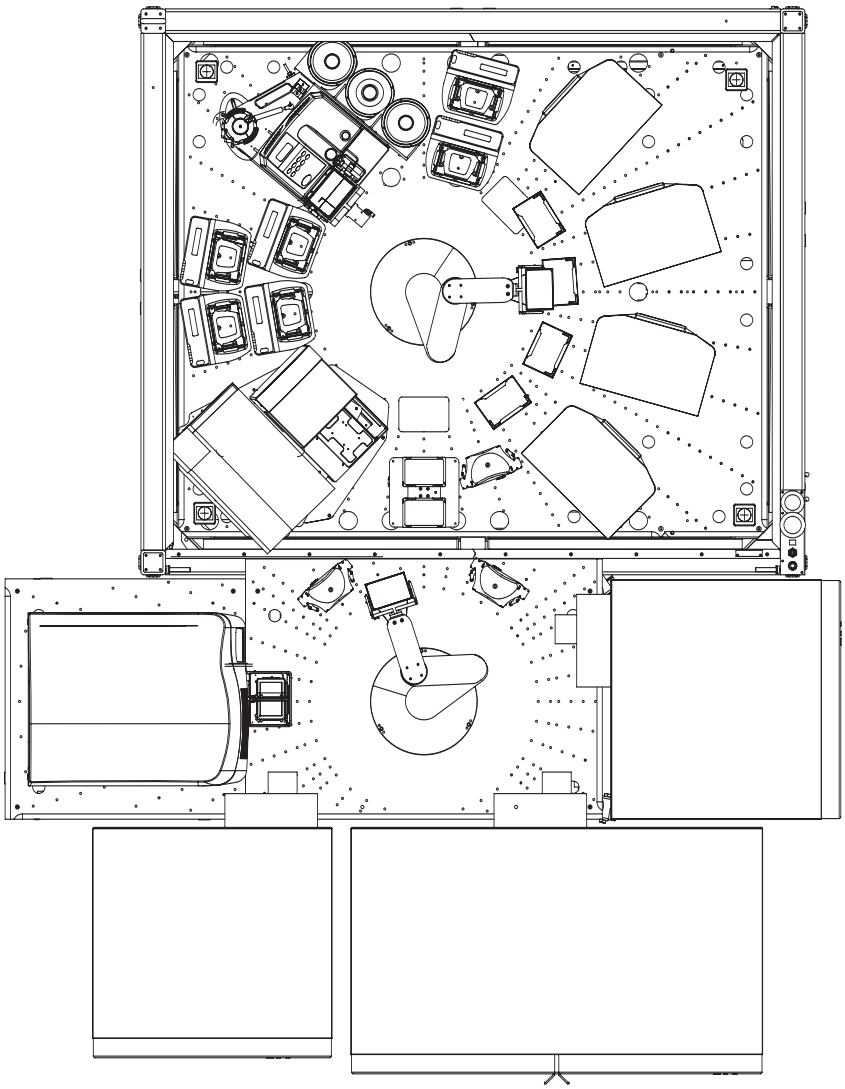
Agilent BioCel System Configuration Compound Plate Storage and Replication

Application Bulletin

In compound handling, sample inventory and sample integrity are the keys to success. Agilent Automation Solutions designed this BioCel to link into your LIMS for receiving and delivering inventory information, keeping both the BioCel database and your sample inventory synchronized and up-to-date. Flexibility in plate format and liquid handling options allow the simultaneous use of 384- and 1536-well plates, as the source or destination, accommodating volume transfers from 2.5 nL to 50 µL. This BioCel is a dual robot system, with a variety of liquid handling options (Agilent Vertical Pipetting Station, Genetix aliQuot, Innovadyne Nanodrop and Labcyte Echo 550).

Source and destination plate sample integrity is ensured by appropriate storage in one or more integrated environments that control temperature, CO_2 and humidity. Source plates typically contain compounds and destination plates typically contain cell suspensions, buffers or protein solutions. Agilent VWorks, the dynamic scheduling software, allows for throughput of more than a million compounds a day, producing compound bank copies for several users and different applications in parallel. The plate storage capacity (two LiCONiC StoreX 500, one LiCONiC StoreX 1000 and six Agilent Labware Stacker units, 2000 plates in total) accommodates typically sized compound banks and several output copies. The addition of the centrifugation capability (Agilent Microplate Centrifuge) and plate shaking stations (H+P Teleshakes) further enhances this system's capabilities.



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Module List

Component	Quantity	Function
Agilent robot	2	360° high speed robotic plate handler
Agilent Vertical Pipetting Station	4	Low volume compound transfer
Labcyte Echo 550	1	Low volume compound transfer
Innovadyne Nanodrop	1	Low volume reagent distribution
Genetix aliquot	3	Bulk reagent distribution
Agilent Microplate Centrifuge	1	Front-loading centrifuge
LiCONiC 1000	1	1000-plate controlled environment storage
LiCONiC 500	1	500-plate controlled environment storage
LiCONiC 5000	1	500-plate temp & CO_2 controlled incubation
Agilent Labware Stacker	6	50-plate room temperature storage
Lid Hotel*	3	Lid removal, storage and return
H+P 1536 PlateShaker	4	1536 compatible plate shaker
Transfer Station	1	Transfer plates between robots
Chilled Vertical Pipetting Station shelves	4	Preservation of temperature-labile reagents

* Lid Hotel concept concept developed by Novartis Pharma AG, NIBR/DT/IAT, Basel, Switzerland

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Published in the U.S.A. February 25, 2009
5990-3621EN

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