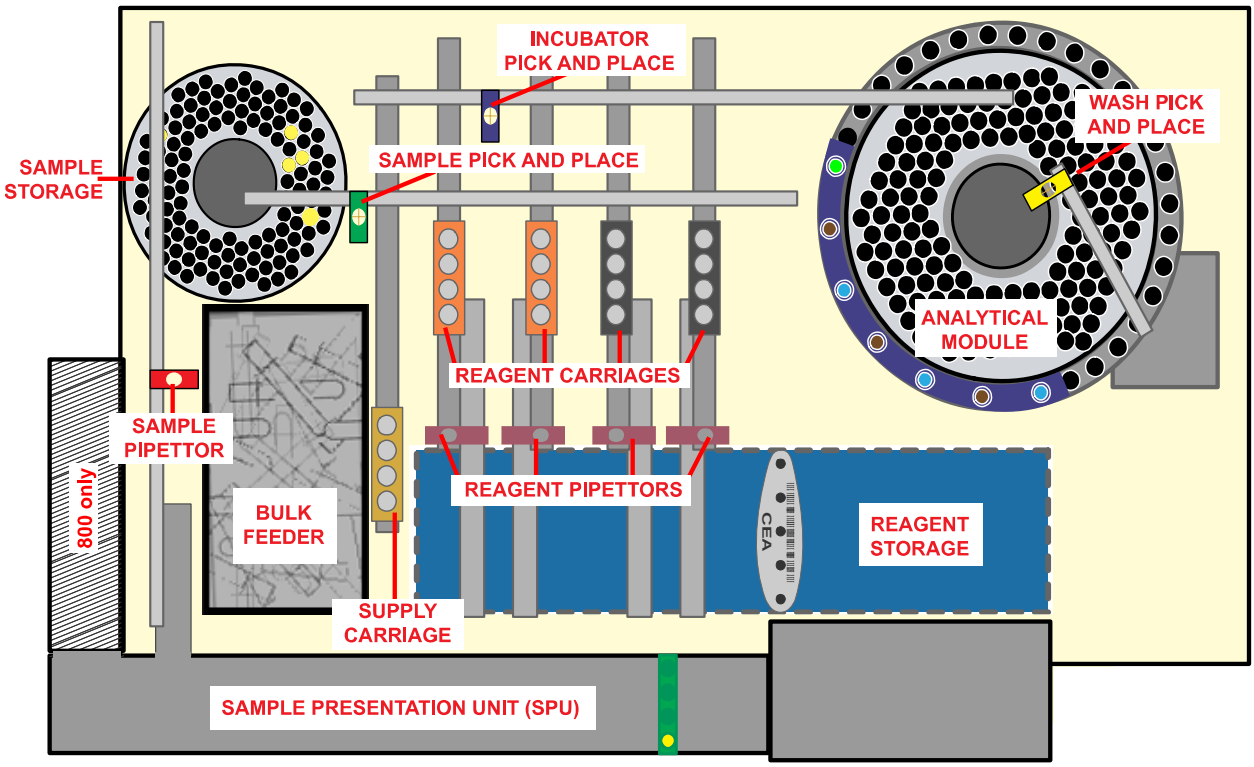
DxI Sample Processing Overview



DxI Sample Processing

1. A vessel is moved from the Bulk Feeder to the Supply Carriage, which transports it to the Sample Pick and Place (PnP).

2. The Sample PnP moves the empty Sample Vessel (SV) to Sample Storage, which rotates, aligning the SV with the Sample Pipettor.

3. Sample racks are transported to the Sample Pipettor by the Sample Presentation Unit (SPU).

4. The Sample Pipettor aspirates an aliquot of the sample and delivers it to the empty SV.

5. The sample rack is no longer required and is moved to the offload area.

6. The Supply Carriage receives another empty vessel from the Bulk Feeder, which is delivered by the Sample PnP to one of the Reagent Carriages for use as a Reaction Vessel (RV).

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7. The SV with the sample aliquot is delivered to the Reagent Carriage containing the RV by the Sample PnP.

8. The Reagent Carriage and a reagent pack are moved into alignment with the Reagent Pipettor.

9. The Reagent Pipettor transfers sample* from the SV to the empty RV.

10. The required reagent components* are added to the RV with the sample and mixed by the Reagent Pipettor.

11. The RV is transported to the Incubator PnP, which transports it to the incubator in the Analytical Module for incubation.

12. The SV may be sent back to Sample Storage if required by the system.

13. When incubation is complete, the RV is transferred to the wash carousel in the Analytical Module by the Wash PnP.

14. The RV is washed three times. After the final wash, substrate is added.

15. After substrate addition, the RV is incubated again and light is generated by chemiluminescence**.

16. RLU values are read from the RV by the Luminometer.

17. The used RV is transported to waste.

18. If the SV is no longer needed by the system, it is also transported to waste.

*The order of sample and reagent addition to the RV is assay dependent.
**Additional information on the theory of chemiluminescence may be found in the Appendix section of this workbook.