

IMS-P2 **Establishment of Rapid and Practical Reaction Condition Screening System: Advanced Technology Using a Combination of High Throughput Synthesis and Automated Analysis System**

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It's hard to make a study regarding various chemical reaction conditions because it spends a good deal of time and effort. If we can get the perfect reaction conditions in a very short period, it will definitely streamline our workflow. To improve these situations, we established the rapid and practical reaction screening system (RSS) using a combination of high throughput technology and automated analysis system. RSS enabled the screening of 48 reactions at one time across a variety of reactions including chemical-composition variables (e.g., catalysts, ligands, solvents, acids, bases) and conditions (e.g., temperature, time) to quickly optimize the reaction parameters using minimal amounts of materials within a single day. RSS made an extraordinary impact on our drug discovery research activities. The poster will provide an outline of the basic design concepts and some case examples.