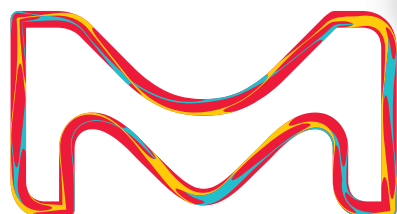


KitAlysis™

High-Throughput Screening Platform



The life science
business of Merck
operates as
MilliporeSigma in
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Sigma-Aldrich®
Lab & Production Materials

KitAlysis™ High-Throughput Screening Platform

In the high-pressure environment of discovery chemistry, time is everything. While general catalytic methods exist, substrate dependency makes it difficult to predict optimal conditions in practice. A thoughtful screening process is the best way to cover a large amount of chemical space quickly while using small amounts of often precious intermediates.

KitAlysis High-Throughput Screening Kits provide the optimal solution to quickly and efficiently identify or optimize suitable catalytic reaction conditions.

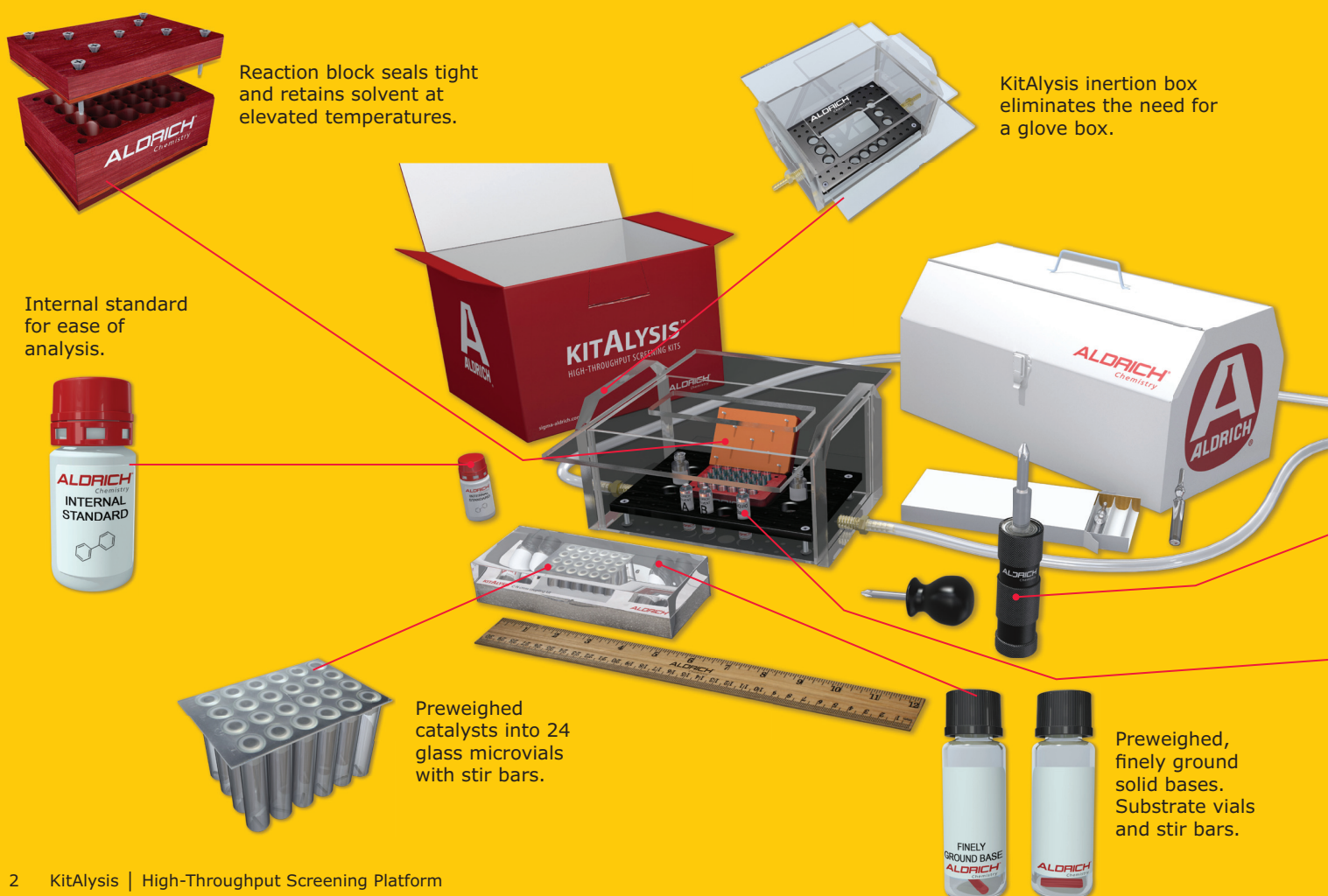
Features include:

- Microscale format requires only ~100 mg total of each substrate to run 24 unique chemical reactions (3–4 mg per reaction)
- Reaction array (catalysts, solvents, bases, and temperature) is designed and validated by practicing medicinal/process chemists in some of the largest pharma companies in the world

- All components are included. End-user supplies only substrate and commonly used lab essentials (pipettes and syringes)
- KitAlysis Labware eliminates the need to set up reactions in a glove box

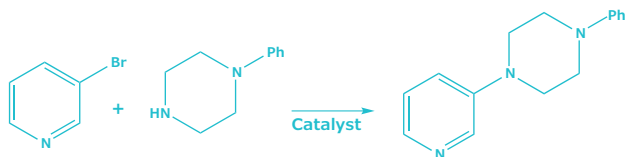
KitAlysis technology showcases the most widely used catalytic methods of synthetic chemists in both academia and industry, translated into an off-the-shelf screening system. Now, any bench chemist can rapidly run 24 unique microscale reactions in parallel with conditions tailored to ensure the best possible chance of success.

To learn more and access comprehensive tools, visit SigmaAldrich.com/kitalysis

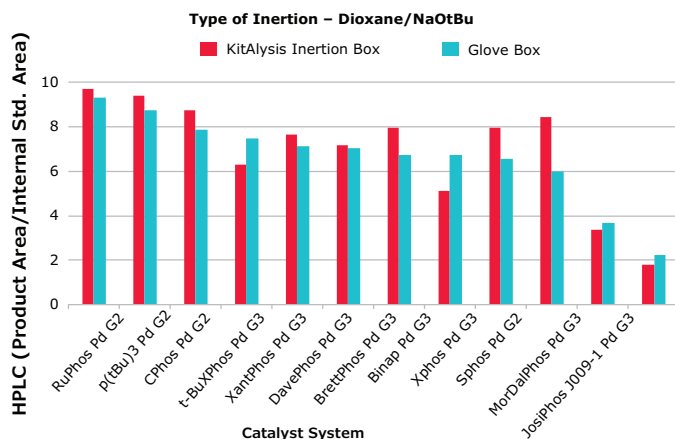


Head-to-head Comparison

Head-to-head comparison of running test reaction (Scheme 1) under standard glove box conditions and using the KitAlysis™ Benchtop Inertion Box.

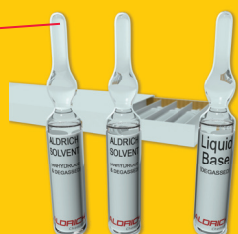


Scheme 1



Custom torque screwdriver makes a perfect seal every time.

Ampulized Sure/Seal™ anhydrous solvents and liquid bases.

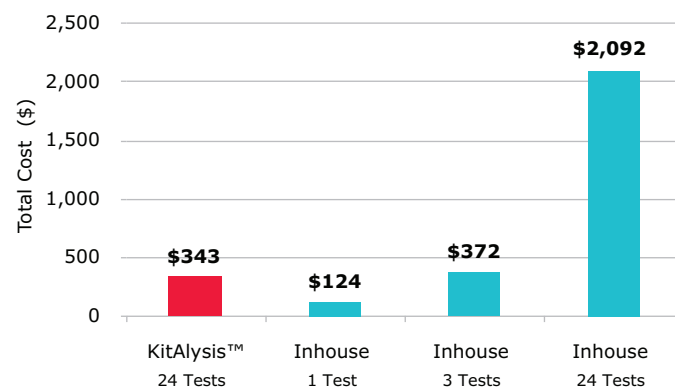


Cost Analysis

Cost analysis of running standard reaction on laboratory scale vs. running 24 unique reactions with KitAlysis™ High-Throughput Screening kits.

| | KitAlysis™ | Inhouse Cost | | |
|--------------------------|--------------|-------------------|-------------|--------------------|
| | 24 Reactions | 1 Reaction | 3 Reactions | 24 Reactions |
| Material Cost | — | \$75 ¹ | \$225 | \$916 ² |
| Labour Cost ³ | \$98 | \$49 | \$147 | \$1,176 |
| KitAlysis Cost | \$245 | — | — | — |
| Total | \$343 | \$124 | \$372 | \$2,092 |
| Saving | \$1,749 | — | — | — |

1. Minimal typical cost of purchasing new catalyst.
2. Average cost of the 12 catalyst in the kit based upon the smallest SKU size available, excludes anhydrous solvents and bases.
3. Salary cost based on chemist salary <http://cen.acs.org/articles/93/i44/American-Chemical-Society-Members-Earn.html>. Average time to plan, set-up, and analyze (single reaction = 1 hour, 24 reactions with KitAlysis = 2 hours)



| Cat. No. | Product Description |
|-----------------------|--|
| Z742064 | KitAlysis™ Benchtop Inertion Box |
| Z742107 | KitAlysis™ 24-well Reaction Block and Screwdriver Set |
| Z742108 | KitAlysis™ 24-well Reaction Block and Inertion Box Combination Starter Set |
| KITALYSIS-CN | KitAlysis™ High-Throughput Buchwald-Hartwig Amination Reaction Screening Kit |
| KITALYSIS-SM | KitAlysis™ High-Throughput Suzuki-Miyaura Cross-Coupling Reaction Screening Kit |
| KITALYSIS-RCM | KitAlysis™ High-Throughput Medium (5, 6, 7) Ring Closing Metathesis Reaction Screening Kit |
| KITALYSIS-24PD | KitAlysis™ High-Throughput 24 Pd Precatalyst Reaction Screening Kit |
| KITALYSIS-CUCN | KitAlysis™ High-Throughput Copper C-N Cross-Coupling Reaction Screening Kit |
| KITALYSISBASE | KitAlysis™ High-Throughput Base Reaction Screening Kit |
| KITALYSISBOR | KitAlysis™ High-Throughput Miyaura Borylation Screening Kit |

To learn more and access comprehensive tools, visit SigmaAldrich.com/kitalysis

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Lit. No. MK_BR3493EN Ver. 2.0
2017 - 08150
02/2019