Catalysis solutions

Making the most of your catalytic process

Amazing where you can go
Process development, design and optimization of catalysis leads are a Solvias specialty. The development process often works in tandem with our screening efforts. Once we find a screening hit (or once you supply us with your hit), our experts will set out to develop that lead for implementation in your process. Experience counts in this area. This makes it possible to apply the most rational and direct approach in the development of your catalytic process, from mg screening and kg scale-up, to tech transfer into production tanks.

Solvias offers a flexible HTE screening arrangement that allows you to investigate your catalytic transformation on a 96-well plate with a custom-tailored design. We view this research service as an extension to your laboratory and wish to fit into your drug development process with maximum flexibility, quick results, and competitive pricing.

**OUR SERVICES**

**HIGH THROUGHPUT EXPERIMENTATION (HTE)**
- Asymmetric homogeneous hydrogenation
- C-X coupling
- Asymmetric C-C bond formation and hydrofunctionalization
- Heterogeneous hydrogenation
- Biocatalysis
- Racemic resolution

**PROCESS DEVELOPMENT AND PRODUCTION**
- Catalysts and ligands for commercial supply by Solvias
- Optimization (semi-automated parallel autoclaves)
- Fine tuning, quality risk and risk analysis (twenty-four 50 ml reactors permit very accurate fine tuning)
- Scale-up and proof of concept (large selection of autoclaves, 100 ml-50l)
- Kilo-scale production (high pressure reactors, 5l, 16l and 50l)
Within the chemical development group, and as a critical component of process research, Solvias relies on the highly efficient High Throughput Experimentation platform. High Throughput Experimentation (HTE), combined with rational design of experiments (DoE), is a powerful tool for rapidly identifying reaction conditions that consist of multiple reaction parameters to be screened and optimized. With this strategy, a large experimental space and serendipity can be covered and exploited. Until now, these screening tools have been used most successfully with asymmetric homogeneous hydrogenation, CX-coupling, classical racemic resolution, carbonylation, hydroformylation, diastereomeric crystallization, biocatalysis development, kinetic resolution using transition metal catalysis, standard organic transformation (such as glycosidation) as well as customized screening capabilities in the rapidly growing area of organocatalysis.

This fast and cost effective screening solution can enhance the route selection process for any chiral and non chiral intermediate or API. We assist you in selecting the most economic and viable route taking your development stage into consideration. Complemented by scale-up and manufacturing capabilities for APIs up to clinical phase II, Solvias supports its customers during the entire chemical and analytical development process.

### HTE TECHNOLOGY
**Accelerating chemical (process) development**

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<tr>
<th>ORDER</th>
<th>SET UP HTE ANALYTICS</th>
<th>PERFORM HTE PLATE</th>
<th>HTE ANALYSIS &amp; REPORTING</th>
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<td>Easy to get started</td>
<td>Typically adapted from an HPLC method. Analysis time &lt; 10 minutes</td>
<td>96 reactions performed to customer specifications</td>
<td>HPLC analysis and result reporting</td>
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**PREPARE FOR LIGHTNING FAST RESULTS**

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<th>2 WEEKS</th>
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**96-WELL PLATE DESIGN**
- Benefit from custom-designed HTE plates for evaluating your target transformation

**MAXIMAL FLEXIBILITY**
- Substitute your own ligand choices
- 150 ligands to choose from covering Solvias’ technical scale as well as patent free and third-party ligands

**SPEED**
- Lightning fast results