

# Peptide Synthesis

## Capabilities and Experience in Peptide Chemistry

### Unlocking the Potential of Peptide Synthesis

At o2h discovery, we are dedicated to advancing scientific research and drug discovery through exceptional peptide synthesis services. Our team specializes in producing a wide range of peptides, from milligram to gram scale, ensuring high-quality, customized solutions for your research needs.

### Our Peptide Platform

state-of-the-art facility for peptide purification and characterization.	Rapid peptide library generation for screening	Master in solid and solution phase synthesis for complex peptides
Capable to generate up to 50-mer linear and cysteine-rich disulfide-bridged peptides	Experience in high-quality peptide delivery	Syro I synthesiser for simultaneous solid-phase synthesis of up to 24 peptides

### Peptide Modification

We offer a large variety of peptide modification including but not limited to the following

- Branched Peptides
- Acetylated Peptides
- Succinylated Peptides
- Cyclic Peptides
- Stapled Peptides
- PEGylated Peptides
- Citrullinated Peptides
- Phosphorylated Peptides
- Amidated Peptides
- Biotinylated Peptides

### Additional Services

Assay Development (SPR, FP, ChamelogK)	Titration (Acid-Base & Karl Fisher)
Chromatography (HPLC, TLC, GC, IC)	pH Adjustment and Amino Acid Analysis
Chromatography with LC-MS/ESI	Metallic Analysis (AAS, ICP, ICP-MS)
Spectroscopy (UV-VIs, IR, NMR)	Counter Ion Exchange (TFA removal)
Assay Development (SPR, FP, ChamelogK)	Solubility Testing

### Equipment

With a full range and optimal equipment ratio, and a dedicated analytical team working 24/6, we manage and achieve high 'speed' delivery

Analytical	Items	Reaction Technology	Items	Purification	Items
SFC - Investigator	1	Microwave	12	SFC - Preparative (mg, gm, Kg-scale)	1
SFC - UPC2	1	Rotavapor	>1 every 2 scientists	Flash System	29
NMR (400 MHz Bruker)	4	20L Rotavapor	4	Scale up Flash System	2
LCMS	9	Lyophilizer	13	PREP HPLC	6
HPLCs	8	Genevac EZ-2	1	PREP HPLC - UV/ELSD	1
HPLC - CAD & DAD	1	Hydrogenators	46	Mass Directed Prep HPLC	1
LCMS/MS	0	20L Glass Reactor	1		
Polarimeter	1	Peptide Synthesizer	1		
Karl Fischer Titrator	1				

### Automated Peptide Synthesizer System

o2h discovery has added a fully automated parallel Peptide Synthesizer Syro I, with a one-arm pipetting robot to expand our chemistry synthesis capabilities. This system allows for multiple reactions to occur simultaneously, ensuring rapid delivery of peptide synthesis

- One Robotic Arm
- Max no of peptides 96
- Inert gas blanket option
- Separate cleavage workstation
- Reactor vial size 2.5 10 and 20 mL
- In-situ and pre-activation both
- Vortex mixing (speed control knob)
- Amino Acid vessel standard 40 X 50 mL
- Reagent bottles 5 (2 x 500 mL: 3 x 200 mL)
- 2 digital Syringe pumps for liquid handling
- Conventional heating option (max 96 degC)
- Scale range 0.001 to 0.6 mmol (1 to 600 umol)

### Chemistry Case Studies: o2h discovery

Example synthesis of reference peptide compound prepared

