

## PEPTIDE CHEMISTRY SERVICES

### (A) Custom peptide synthesis

Single peptides are chemically synthesized by fully automated or manual Fmoc chemistry and solid-phase techniques. Options are:

Chemistry	Fmoc solid-phase chemistry
Product scale	(i) 5-100 mg (automated performance) (ii) 100-2000 mg (manual performance)
Purification	by preparative reverse-phase HPLC
SAR peptides	Design and chemical synthesis of peptide arrays to investigate structure-activity relationships. Systematically varied peptide analogs are synthesized, e.g. alanine scans, D-amino acid scans, disulfide scans, charge scans. Depending on the amount and purity required, a number of analogs ranging from 10 to 250 substances is possible.
Performance	according to standard operating procedures; full traceability of reagents
Routine analysis	reverse-phase HPLC and mass spec
Quality assurance	<ul style="list-style-type: none"><li>- ion-exchange chromatography</li><li>- capillary electrophoresis</li><li>- sequence analysis (automated Edman degradation)</li><li>- mass spectral analysis (ESI-MS and MALDI available)</li><li>- liquid chromatography-mass spectrometry (LC-MS)</li><li>- amino acid analysis</li><li>- water content</li><li>- residual solvents</li><li>- lipopolysaccharide (LPS); microbial burden</li><li>- other analytical methods on request (NMR, CD)</li></ul>
Certificate of analysis (CoA)	available for each product

## Targets

- typical length: 5-50 amino acid residues; up to 100 residues possible
- incorporation of unnatural amino acids and D-amino acids
- N- and C-terminus modified; phosphates; sulfates
- mono or double fluorescence-labeled
- dimeric peptides (homo- or heterodimeric)
- hydrophobic peptides (membrane components)
- peptoids
- multiple-antigenic peptides (MAPs)
- disulfide-bonded peptides (1-3 disulfides)

## Special know-how

- large multiple disulfide-bonded peptides incl. disulfide assignment
- large peptides ranging from 50-100 residues by native chemical ligation
- „difficult“ sequences
- arrays of structurally related analogs for SAR studies
- development of synthetic procedures
- chemokines, defensins, protease inhibitor, regulatory peptides