



## Technical Support Information Bulletin 1054

### Fmoc-Rink Amide AM Resin and Fmoc-Rink Amide MBHA Resin

Fmoc-Rink amide AM resin is used to prepare peptide amides utilizing the Fmoc chemistry. The peptide sequence is assembled under basic or neutral conditions, then the completed peptide is cleaved from the resin under acid conditions. Typically the peptide is cleaved from the resin using 50% TFA in DCM. The following procedures are recommended.

#### Attachment of the First Amino Acid

1. Pre-swell the resin in DMF and deprotect with 20% piperidine/DMF for 20 to 30 minutes. Wash the resin thoroughly with DMF.
2. Couple the appropriate C-terminal amino acid to the resin using any of the standard coupling procedures. Remove a tiny amount of the resin and wash several times with DCM. Test for unreacted amine using the Kaiser test. If the test is positive, let the mixture stand for 30 minutes before repeating the test. Continue this procedure until the test is negative.
3. Wash the resin thoroughly with DMF, deprotect, and continue on with the synthesis.

#### Cleavage of the Peptide from the Resin<sup>1</sup>

1. Place the resin in a round bottom flask and add 20% piperidine in DMF until the resin is just covered. Let the mixture stand for 30 minutes to remove the N-terminal Fmoc group.
2. Transfer the resin to a sintered glass funnel with fine porosity and apply vacuum. Wash the resin 3 times with DMF. Slurry the resin in DCM three times to remove the DMF.
3. Slurry the resin in 20% TFA in DCM (v/v) containing 3-5%(v/v) 1,3-dimethoxybenzene. Allow the mixture to stand at room temperature for 15 minutes. Filter and wash the resin with DCM.
4. Combine the filtrates and add 8-10 times the volume of cold ether. If necessary, keep the mixture at 4 °C overnight to precipitate the peptide. Filter the peptide using a fine sintered glass funnel. Wash the crude peptide further with cold ether.

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<sup>1</sup> Based on procedures reported in Stathopoulos, P.; Papas, S.; Tsikaris, V. *J. Pept. Sci.* **2006**, *12*,:227-32.