

TECHNICAL NOTE

Protocol for Manual Synthesis of a Peptide

For each 1.0 gram of solid support perform the following steps for each addition:

In an apparatus similar to the one pictured here:

1. Wash the support with 20 mL *N,N*-dimethyl formamide (DMF).
2. Perform Fmoc removal with 5 mL 20% piperidine in DMF for 10 min.
3. Filter off the Fmoc solution and repeat twice more.
4. Wash with 20 mL DMF.
5. Activate by mixing:
 - a) 4 equiv of Fmoc-AA-OH [m.w. varies with the AA]
 - b) 4 equiv of *O*-(7-azabenzotriazole-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate (HATU) [m.w. = 380.2]
 - c) 8 equiv of *N,N*-diisopropylethylamine (DIPEA) [m.w. = 129.2 and density = 0.742 gm/ml]
 - d) Dilute to a final concentration of Fmoc-AA and HATU of 0.3 M with DMF
6. Add the above to the solid support, mix and allow to stand at 25° C (room temperature) for 30-60 min. with occasional mixing.
7. Wash with 20 mL DMF.

A Simple Apparatus for Performing Manual Syntheses

For solid supports weighing up to 0.5 gm use a 5 mL syringe and for weights between 0.5 and 1.0 gm use a 10 mL syringe.

The polypropylene filter can be obtained in sheet form from:

SCI
Phone: 520 855 0159
Part Number: BB2061-125A

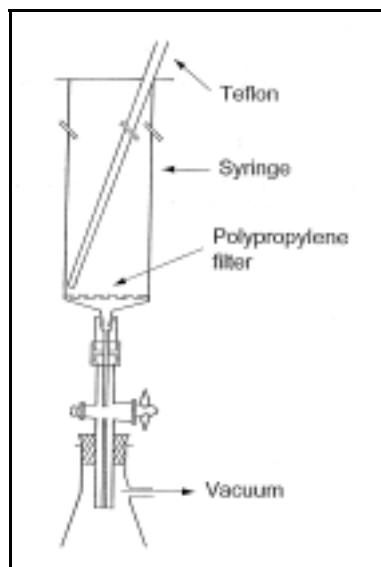


Figure 1. Apparatus for Manual Synthesis

Ordering Information

DMF (1.0 L) GEN910003

20% (v/v) Piperidine/DMF (1.0 L)
GEN910008

HATU (5 gm) GEN076521

DIPEA (4 X 90 ml)
GEN075000