

Synthesizing Cholesterol:Cyclodextrin Complexes
(Klein et al. Biochemistry 34, 13784 (1995))

Reagents Needed:

Methyl- β -Cyclodextrin
Cholesterol (or other sterol)
Phosphate-buffered saline
Isopropanol
Chloroform

Procedure:

1. Dissolve 1 g methyl- β -cyclodextrin in 11 ml PBS in a large glass test tube
2. Dissolve 30 mg cholesterol in 400 μ l isopropanol/chloroform (2:1) in a small glass tube
3. Warm the cyclodextrin solution to 80° C in a water bath with continuous stirring
4. Add the cholesterol solution in 50 μ l aliquots, stirring until it all goes into solution before adding additional material
5. Cool. May be stored almost indefinitely at room temperature.

The final solution contains 6.8 mM cholesterol and 70 mM cyclodextrin (~9% cyclodextrin).