CLAIMS

1. A process for producing a copolyester, comprising:

(a) producing isoidide 2-(4-carbomethoxyphenyl) ether by:

(i) protecting the 2-position of isosorbide with a protecting group;

(ii) functionalizing the 5-position of isosorbide with a leaving group to form a reactive ester;

(iii) nucleophilicly displacing the leaving group in a reaction with an alkali metal alkoxide or phenoxide to give an isoidide ether through a stereochemical inversion of the 5-position; and

(iv) removing the protective moiety to create isoidide 2-(4-carbomethoxyphenyl) ether; and

(b) melting the isoidide 2-(4-carbomethoxyphenyl) ether produced in step (a) and a polyester, optionally with a catalyst.

2. The process of claim 1, wherein the functionalizing the 5-position of isosorbide is through a mesylation reaction.

3. The process of claim 1, wherein the polyester is polyethylene terephthalate.