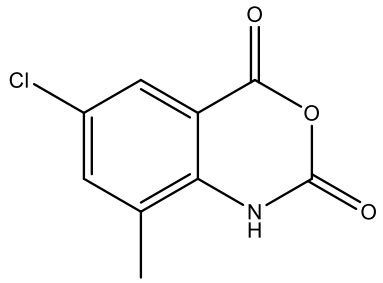
WHAT IS CLAIMED IS:

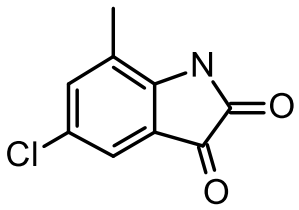
1. A method of preparing a compound of Formula V



the method comprising

I) forming a first mixture comprising

A) a compound of Formula III having the following structure



B) a solvent; and

C) a halogenation reagent;

II) reacting the first mixture;

III) adding an oxidation agent to the first mixture in the presence of a catalyst to form a further mixture; and

IV) reacting the further mixture.

2. The method of claim 1, wherein step III) comprises introducing a second mixture to the first mixture to form the further mixture, the second mixture comprising D) the oxidation agent and E) the catalyst.

3. The method of claim 1, wherein the solvent B) is selected from acetonitrile, dichloroethane, toluene, chlorobenzene, xylene, acetic acid, acetic anhydride, propionic acid, butyric acid, and combinations thereof.

4. The method of claim 1, wherein the halogenation reagent is selected from a chlorination reagent, a bromination reagent, an iodination reagent, and combinations thereof.

5. The method of claim 1, wherein the method step ii) of reacting the first mixture occurs at a reaction temperature in the range of 20 °C to 140 °C.

6. The method of claim 1, wherein the oxidation agent is selected from oxygen, chlorine, sodium hypochlorite, chromium trioxide, 3-chloroperoxybenzoic acid, hydrogen peroxide, peroxyacetic acid, potassium peroxymonosulfate, potassium permanganate, and combinations thereof.

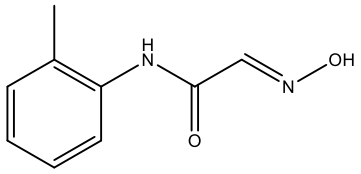
7. The method of claim 1, wherein the catalyst is selected from sulfuric acid, hydrogen chloride, nitric acid, and combinations thereof.

8. The method of claim 1, wherein the method step iv) of reacting the third mixture occurs at a reaction temperature in the range of 20 °C to 100 °C.

9. The method of claim 1, wherein the compound of Formula III is prepared according to a method comprising

    I) forming a mixture comprising

        A) a compound of Formula II having the following structure

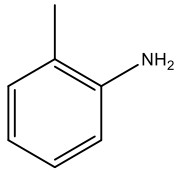


        and

        wherein the compound of Formula II is prepared according to a method comprising

i) forming a mixture comprising

a) a compound of Formula I having the following structure



b) chloral hydrate;

c) a hydroxylamine derivative;

d) a solvent;

e) an inorganic salt; and

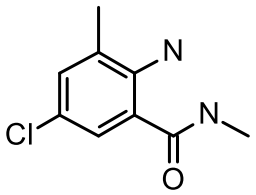
f) an acid; and

ii) reacting the mixture; and

B) an acid; and

II) reacting the mixture.

10. A method of preparing a compound of Formula VI having the following structure



the method comprising

I) forming a mixture comprising

A) a compound of Formula V as defined in claim 1, wherein the compound of Formula V is prepared by the method of claim 1;

B) an alkylamine; and

C) a solvent; and

II) reacting the mixture.