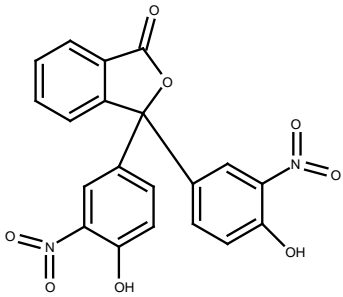
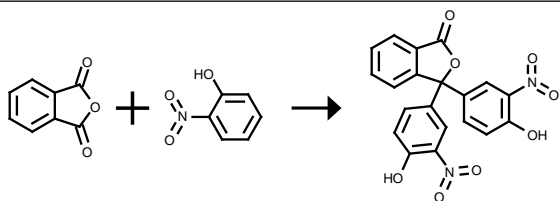
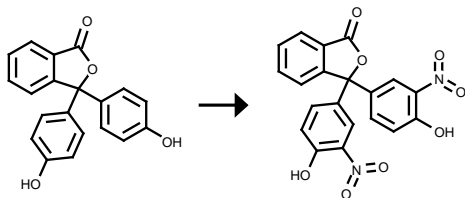


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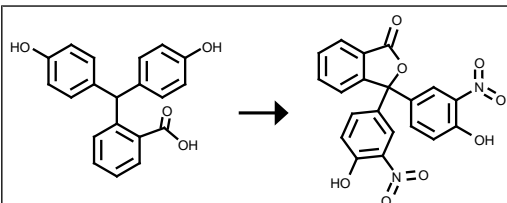
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 Rx-ID: 24714569 [View in Reaxys](#)

Yield	Conditions & References
89 %	<p>Example Name 4</p> <p>A mixture of 2-nitrophenol (0.2M), phthalic anhydride (0.1M), polyphosphoric acid (0.25M), and zinc chloride (0.01M), was stirred and heated at 100.deg. C. for 3 hours.</p> <p>The reaction mixture was cooled to room temperature and added to ice-water mixture when the product precipitated. The product was filtered, thoroughly washed with water and dried.</p> <p>Recrystallization from ethanol with charcoal treatment furnished pure 3,3-bis-(4-hydroxy-3-nitrophenyl)-1-(3H)-isobenzofuranone in 89percent yield.</p> <p>With PPA, zinc(II) chloride, Time= 3h, T= 100 °C , Product distribution / selectivity</p> <p>Patent: Sabnis, Ram W.; Kehoe, Timothy D.; Balchunis, Robert James; US2006/222601; (2006); (A1) English</p> <p>View in Reaxys</p>


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Yield	Conditions & References
78 %	<p>Example Name 23</p> <p>A mixture of phenolphthalein (0.062 mol) in acetic acid (290 mL) was stirred at 15.deg. C. Concentrated nitric acid (0.136 mol, 65percent) in acetic acid (10 mL) was slowly added to stirring mixture at 15.deg. C.</p> <p>The reaction mixture was further stirred for 6 hours at room temperature and added to ice-water mixture when the yellow colored product precipitated.</p> <p>The product was filtered, thoroughly washed with water and dried.</p> <p>Recrystallization from ethanol with charcoal treatment furnished pure 3,3-bis-(4-hydroxy-3-nitrophenyl)-1-(3H)-isobenzofuranone as pale yellow crystals in 78percent yield. IR (KBr): 3262, 1766, 1627, 1538, 1423 cm⁻¹. ¹H-NMR (DMSO-d₆): δ 9.67 (s, 2H, 2OH), 6.71-7.16 (m, 6H, aromatic), 7.46-7.98 (m, 4H, aromatic) ppm.</p> <p>Mass spectra: m/z 408 (M⁺).</p> <p>With nitric acid in acetic acid, Time= 6h, T= 15 - 20 °C , Product distribution / selectivity</p> <p>Patent: Sabnis, Ram W.; Kehoe, Timothy D.; Balchunis, Robert James; US2006/222601; (2006); (A1) English</p> <p>View in Reaxys</p>

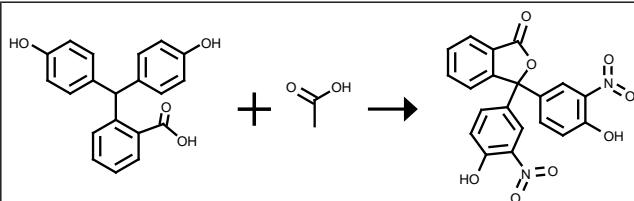

 Rx-ID: 381082 [View in Reaxys](#)

Yield	Conditions & References
	<p>With ethanol, nitric acid</p> <p>Errera; Berte; Gazzetta Chimica Italiana; vol. 26 I; (1896); p. 265</p> <p>View in Reaxys</p>

With nitric acid, acetic acid

Hall; Chem. News J. Ind. Sci.; **vol. 67**; (1893); p. 93

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Rx-ID: 640325 [View in Reaxys](#)

Yield Conditions & References

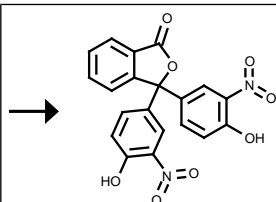
With sulfuric acid, nitric acid

Patent; Clayton Aniline Co.; DE52211; Fortschr. Teerfarbenfabr. Verw. Industriezweige; **vol. 2**; p. 90

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Gattermann; Chemische Berichte; **vol. 32**; (1899); p. 1137,1139; Chem. Zentralbl.; **vol. 69**; nb. II; (1898); p. 196

[View in Reaxys](#)



Rx-ID: 5579887 [View in Reaxys](#)

Yield Conditions & References

Mehta; Krishnamurthy; Journal of the Indian Chemical Society; **vol. 40**; (1963); p. 486

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Mehta et al.; Current Science; **vol. 30**; (1961); p. 460

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