



**CAS Registry Number:** 941-75-3  
**Molecular Formula:** C<sub>9</sub>H<sub>14</sub>O<sub>4</sub>  
**Molecular Weight:** 186.207  
**Accurate Mass:** 186.08921  
**Percentage Composition:** C 58.05%; H 7.58%; O 34.37%  
**Boiling Point:** Bp<sub>17</sub> 118.5-119°

>>**Variant:** (1*RS*,2*SR*)-form

**Synonym(s):** *cis*-form

**CAS Registry Number:** 1461-96-7  
**Molecular Formula:** C<sub>7</sub>H<sub>10</sub>O<sub>4</sub>  
**Molecular Weight:** 158.154  
**Accurate Mass:** 158.05791  
**Percentage Composition:** C 53.16%; H 6.37%; O 40.47%  
**Physical Description:** Needles (H<sub>2</sub>O)  
**Melting Point:** Mp 140°  
**Solubility:** Sol. H<sub>2</sub>O  
**pKa Value:** p*K*<sub>a1</sub> 4.42; p*K*<sub>a2</sub> 6.57 (20°)

>>**Derivative:** Di-Me ester

**CAS Registry Number:** 4841-91-2  
**Boiling Point:** Bp<sub>20</sub> 129°

>>**Derivative:** Anhydride

**Synonym(s):** Tetrahydro-1*H*-cyclopenta[*c*]furan-1,3(3*aH*)-dione, 9CI

**CAS Registry Number:** 35878-28-5  
**Molecular Formula:** C<sub>7</sub>H<sub>8</sub>O<sub>3</sub>  
**Molecular Weight:** 140.138  
**Accurate Mass:** 140.047345  
**Percentage Composition:** C 60.00%; H 5.75%; O 34.25%  
**Melting Point:** Mp 73.5-74°  
**Boiling Point:** Bp<sub>1.5</sub> 100-102°

>>**Derivative:** Imide

**Synonym(s):** Tetrahydrocyclopenta[*c*]pyrrole-1,3(2*H*,3*aH*)-dione, 9CI

**CAS Registry Number:** 5763-44-0  
**Molecular Formula:** C<sub>7</sub>H<sub>9</sub>NO<sub>2</sub>  
**Molecular Weight:** 139.154  
**Accurate Mass:** 139.063329  
**Percentage Composition:** C 60.42%; H 6.52%; N 10.07%; O 23.00%  
**Physical Description:** Cryst. (H<sub>2</sub>O)  
**Melting Point:** Mp 85-87°

#### References:

- Aldrich Library of 13C and 1H FT NMR Spectra*, 1992, **1**, 841B, (*nmr*)  
*Aldrich Library of FT-IR Spectra, 1st edn.*, 1985, **1**, 540B, (*ir*)  
Stoermer, R. *et al.*, *Ber.*, 1914, **47**, 1805, (*synth*)  
Goldsworthy, L.J. *et al.*, *J.C.S.*, 1914, **105**, 2642, (*synth*)  
Menon, K.N. *et al.*, *J.C.S.*, 1929, 302, (*imide*)  
Wassermann, A., *Helv. Chim. Acta*, 1930, **13**, 213, (*synth*)  
Fuson, R.C. *et al.*, *J.O.C.*, 1945, **10**, 121, (*synth*)  
Rice, L.M. *et al.*, *J.O.C.*, 1959, **24**, 7, (*imide*)  
Inouye, Y. *et al.*, *Tetrahedron*, 1967, **23**, 3237, (*abs config*)  
Benedetti, E. *et al.*, *J. Phys. Chem.*, 1972, **76**, 790, (*cryst struct*)  
Crockett, G.C. *et al.*, *Synth. Commun.*, 1981, **11**, 447, (*imide*)  
Lu, Y.-W. *et al.*, *J.O.C.*, 1990, **55**, 2503, (*synth, pmr, cmr, ms*)  
Hoberg, H. *et al.*, *Synthesis*, 1991, 395, (*synth, ir, pmr, cmr*)