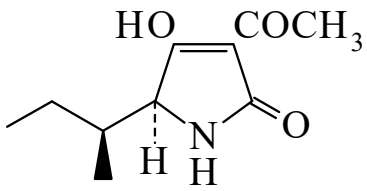
>>**Entry Name: Tenuazonic acid**
Synonym(s): 3-Acetyl-1,5-dihydro-4-hydroxy-5-(1-methylpropyl)-2*H*-pyrrol-2-one, 9CI. 3-Acetyl-5-*sec*-butyltetramic acid. Vivotoxin



CAS Registry Number: 610-88-8
Related CAS Registry Numbers(s): 27778-66-1 75652-74-3

Molecular Formula: $C_{10}H_{15}NO_3$
Molecular Weight: 197.233
Accurate Mass: 197.105194
Percentage Composition: C 60.90%; H 7.67%; N 7.10%; O 24.34%

Biological Source: Prod. by *Alternaria*, *Aspergillus* and *Sphaeropsidales* spp.
Use/Importance: Causes rice leaf rot and brown spot disease of tobacco. Has insecticidal props. Tremorgenic toxin. Antineoplastic and antiviral agent
Physical Description: Viscous oil or pale-brown cryst.
Melting Point: Mp 74-75.5°
Boiling Point: $Bp_{0.035}$ 117°
Optical Rotation: $[\alpha]_{Hg}^{20}$ –136 (c, 0.2 in $CHCl_3$)
Solubility: BERDY SOL: Sol. MeOH, Et_2O, bases; poorly sol. H_2O, hexane
UV: [acid] λ_{max} 219 (ε 5600); 277 (ε 12700) (EtOH/HCl) (Derep) [base] λ_{max} 240 (ε 11700); 279 (ε 14800) (dil. NaOH) (Derep) [neutral] λ_{max} 240 (ε 10800); 280 (ε 13500) (H_2O pH 7) (Derep) [neutral] λ_{max} 240 (ε 11480); 280 (ε 14450) (MeOH) (Berdy) [neutral] λ_{max} 217 (ε 5240); 277 (ε 13400) (EtOH) (Berdy) [base] λ_{max} 240 (); 280 () (MeOH-NAOH) (Berdy) [neutral] λ_{max} 240 (ε 11480); 280 (ε 14450) (H_2O) (Berdy) [acid] λ_{max} 220 (ε 6500); 277 (ε 10000) (MeOH-HCl) (Berdy)
Hazard & Toxicity: LD_{50} (mus, orl) 225 mg/kg ; BERDY HAZD : LD_{50} (mus, ivn) 125 mg/kg , LD_{50} (mus, ipr) 150 mg/kg , LD_{50} (mus, scu) 145 mg/kg , LD_{50} (mus, orl) 225 mg/kg

Sigma: T3408

>>**Derivative:** Na salt
Synonym(s): Sodium tenuazonate. NSC 525816

CAS Registry Number: 1013-59-8
Optical Rotation: $[\alpha]_{Hg}$ –96.7 (c, 2 in MeOH)
Hazard & Toxicity: LD_{50} (rat, orl) 168 mg/kg

>>**Derivative:** Compd. with *N,N*-Dibenzylethylenediamine (1:1)
Synonym(s): Benzathine tenuazonate. NSC 82260

CAS Registry Number: 21327-82-2
Use/Importance: Antineoplastic

>>**Derivative:** 2,4-Dinitrophenylhydrazone

Physical Description: Needles (MeOH)
Melting Point: Mp 199-200°

>>**Derivative:** Semicarbazone

Physical Description: Cryst.
Melting Point: Mp 187-189°

References: