



**Biological Source:** Isol. from a marine bacterium  
**Biological Use/Importance:** Cytotoxic agent  
**Optical Rotation:**  $[\alpha]_D^{22} +5.4$  (c, 1.03 in  $\text{CH}_2\text{Cl}_2$ )  
**UV:** [neutral]  $\lambda_{\text{max}}$  219 (); 274 (sh) () (MeOH) [neutral]  $\lambda_{\text{max}}$  219 (); 274 () (MeOH) (Berdy)  
**Other Data:** Isol. as a mixt. with Caprolactin A. Data given is for the mixt.

>>**Derivative:**  $N^3$ -(7-Methyloctanoyl)  
**Synonym(s):** Caprolactin A

**CAS Registry Number:** 151379-41-8

**Molecular Formula:**  $\text{C}_{15}\text{H}_{28}\text{N}_2\text{O}_2$   
**Molecular Weight:** 268.398  
**Accurate Mass:** 268.215078  
**Percentage Composition:** C 67.13%; H 10.51%; N 10.44%; O 11.92%  
**Biological Source:** Isol. from a marine bacterium  
**Biological Use/Importance:** Cytotoxic agent  
**UV:** [neutral]  $\lambda_{\text{max}}$  219 (); 274 () (MeOH) (Berdy)  
**Other Data:** Isol. as a mixt. with Caprolactin B

>>**Variant:** ( $\pm$ )-form

**CAS Registry Number:** 17929-90-7  
**Molecular Formula:**  $\text{C}_6\text{H}_{12}\text{N}_2\text{O}$   
**Molecular Weight:** 128.174  
**Accurate Mass:** 128.094963  
**Percentage Composition:** C 56.23%; H 9.44%; N 21.86%; O 12.48%  
**Physical Description:** Cryst. (EtOAc)  
**Melting Point:** Mp 68-71°. Mp 147-149°  
**Boiling Point:**  $\text{Bp}_{0.1}$  105°  
**Sigma:** A1041

>>**Derivative:** Hydrochloride

**CAS Registry Number:** 29426-64-0  
**Melting Point:** Mp 294-296°

>>**Derivative:** Picrate

**Physical Description:** Needles ( $\text{H}_2\text{O}$ )  
**Melting Point:** Mp 233 dec.°

>>**Derivative:** *N*-Ac

**Molecular Formula:**  $\text{C}_8\text{H}_{14}\text{N}_2\text{O}_2$   
**Molecular Weight:** 170.211  
**Accurate Mass:** 170.105528  
**Percentage Composition:** C 56.45%; H 8.29%; N 16.46%; O 18.80%  
**Physical Description:** Cryst. (EtOAc)  
**Melting Point:** Mp 160-162°

>>**Derivative:** *N*-Benzoyl

**Molecular Formula:**  $\text{C}_{13}\text{H}_{16}\text{N}_2\text{O}_2$   
**Molecular Weight:** 232.282  
**Accurate Mass:** 232.121178  
**Percentage Composition:** C 67.22%; H 6.94%; N 12.06%; O 13.78%  
**Physical Description:** Cryst. (EtOH)  
**Melting Point:** Mp 203-211°

#### References:

- Pellegata, R. *et al.*, *Synthesis*, 1978, 614, (*synth*, *S*-form)  
Boyle, W.J. *et al.*, *J.O.C.*, 1979, **44**, 4841, (*synth*)  
Davidson, B.S. *et al.*, *Tetrahedron*, 1993, **49**, 6569-6574, (*Caprolactins*)  
Uchikawa, J. *et al.*, *J. Het. Chem.*, 1994, **31**, 877, (*N*-Ac, *N*-benzoyl)