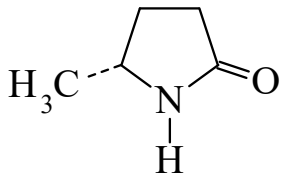
>>**Entry Name: 5-Methyl-2-pyrrolidinone,** 9CI, 8CI
Synonym(s): γ-Valerolactam



(*R*)-*form*

CAS Registry Number: 108-27-0
Related CAS Registry Numbers(s): 1558-60-7

Molecular Formula: C_5H_9NO
Molecular Weight: 99.132
Accurate Mass: 99.068414
Percentage Composition: C 60.58%; H 9.15%; N 14.13%; O 16.14%

Aldrich: M7970-0

>>**Variant:** (*R*)-form

CAS Registry Number: 21395-93-7
Molecular Formula: C_5H_9NO
Molecular Weight: 99.132
Accurate Mass: 99.068414
Percentage Composition: C 60.58%; H 9.15%; N 14.13%; O 16.14%
Physical Description: Oil
Boiling Point: Bp_3 66°
Optical Rotation: $[\alpha]_D^{20}$+26.6 (H_2O)

>>**Derivative:** 1-Chloromethyl

CAS Registry Number: 154747-82-7
Molecular Formula: $C_6H_{10}ClNO$
Molecular Weight: 147.604
Accurate Mass: 147.045091
Percentage Composition: C 48.82%; H 6.83%; Cl 24.02%; N 9.49%; O 10.84%
Use/Importance: Reagent for determination of enantiomeric compn. of alcohols
Physical Description: Liq.
Boiling Point: Bp_6 99°
Optical Rotation: $[\alpha]_D^{20}$+109.9 (c, 0.032 in $CHCl_3$) (>99% ee)

>>**Variant:** (*S*)-form

CAS Registry Number: 1558-60-7
Molecular Formula: C_5H_9NO
Molecular Weight: 99.132
Accurate Mass: 99.068414
Percentage Composition: C 60.58%; H 9.15%; N 14.13%; O 16.14%
Optical Rotation: $[\alpha]_D^{20}$–26.6 (c, 0.9 in H_2O)

>>**Variant:** (±)-form

CAS Registry Number: 62182-32-5
Molecular Formula: C_5H_9NO
Molecular Weight: 99.132
Accurate Mass: 99.068414
Percentage Composition: C 60.58%; H 9.15%; N 14.13%; O 16.14%
Physical Description: Hygroscopic cryst.
Melting Point: Mp 41-43°
Boiling Point: Bp_7 119-120°

>>**Derivative:** Hydrochloride

CAS Registry Number: 62069-49-2
Physical Description: Needles (Et_2O)
Melting Point: Mp 110°

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