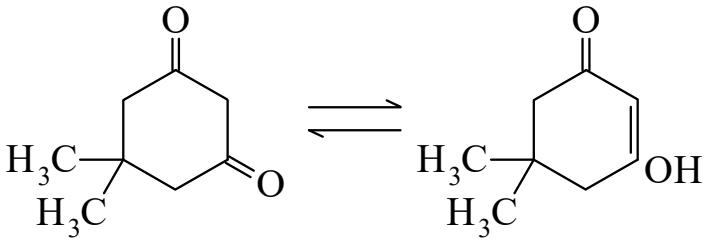
>>**Entry Name: 5,5-Dimethyl-1,3-cyclohexanedione,** 9CI
Synonym(s): 5,5-Dimethyldihydroresorcinol. Methone. Dimedone. 3-Hydroxy-5,5-dimethyl-2-cyclohexen-1-one



CAS Registry Number: 126-81-8
Related CAS Registry Numbers(s): 3471-13-4 82531-23-5
Type of Compound Code(s): PS8300 PM6450 PA0900

Molecular Formula: $C_8H_{12}O_2$
Molecular Weight: 140.182
Accurate Mass: 140.08373
Percentage Composition: C 68.55%; H 8.63%; O 22.83%
General Statement: Enolised β-diketone. Exists in aq. soln. mainly as enol tautomer
Use/Importance: Characterising reagent for carbonyl compds., protecting agent for NH_2 groups. Used in photometric detn. of $CN^{(-)}$
Physical Description: Monoclinic needles or prisms
Melting Point: Mp 148.5-149°
Solubility: Sol. $CHCl_3$, C_6H_6; spar. sol. petrol, H_2O
pKa Value: pK_{a1} 5.27 (25°)

Aldrich: D15330-3
Fluka: 38490
Sigma: D3504

>>**Derivative:** Monooxime

CAS Registry Number: 31933-48-9
Molecular Formula: $C_8H_{13}NO_2$
Molecular Weight: 155.196
Accurate Mass: 155.094629
Percentage Composition: C 61.91%; H 8.44%; N 9.03%; O 20.62%
Physical Description: Cryst.
Melting Point: Mp 115°

>>**Derivative:** Dioxime

CAS Registry Number: 37110-24-0
Type of Compound Code(s): PS8300 PA1400 PM6850
Molecular Formula: $C_8H_{14}N_2O_2$
Molecular Weight: 170.211
Accurate Mass: 170.105528
Percentage Composition: C 56.45%; H 8.29%; N 16.46%; O 18.80%
Use/Importance: Used as 0.5% soln. in EtOH for photometric detn. of Co (λ_{max} 400 nm, ε 23000)
Physical Description: Prisms + $2H_2O$
Melting Point: Mp 176° (anhyd.). Mp 170°
Solubility: Sol. alkaline aq. solns., alcohols, $CHCl_3$

>>**Derivative:** Bisthiosemicarbazone

CAS Registry Number: 79811-20-4
Type of Compound Code(s): PA4950 PM7120 PS8300 PA2700 PA2050 PA1900 PA1850 PA1250 PA0550
Molecular Formula: $C_{10}H_{18}N_6S_2$
Molecular Weight: 286.424
Accurate Mass: 286.103434
Percentage Composition: C 41.93%; H 6.33%; N 29.34%; S 22.39%
Use/Importance: Used as 0.01*M* soln. of hydrochloride in 0.1*M* $HClO_4$ for photometric detn. of $ClO_3^{(-)}$ (λ_{max} 417 nm, ε 18600, 70% $HClO_4$ medium), $BrO_3^{(-)}$ (λ_{max} 415 nm), $IO_3^{(-)}$, $IO_4^{(-)}$, $NO_2^{(-)}$, Pb, Zn
Physical Description: Yellow cryst. (EtOH) (as hydrochloride)
Melting Point: Mp 187-189° (as hydrochloride)
Solubility: Sol. acids, EtOH, DMF
Other Data: Reg. no. refers to hydrochloride