



Percentage Composition: C 72.68%; H 11.18%; O 16.14%

Boiling Point: Bp 228-230°

Optical Rotation: $[\alpha]_{\text{D}}^{20} -80$ (c, 8 in C₆H₆)

Aldrich: 44105-8

Fluka: 45985

>>**Derivative:** Chloroformyl

Synonym(s): Menthyl chloroformate

CAS Registry Number: 7635-54-3

Molecular Formula: C₁₁H₁₉ClO₂

Molecular Weight: 218.723

Accurate Mass: 218.107357

Percentage Composition: C 60.41%; H 8.76%; Cl 16.21%; O 14.63%

Use/Importance: Reagent for resolution of chiral amines and alcohols

Aldrich: 37871-2

Fluka: 23197

>>**Derivative:** Chloromethyl ether

CAS Registry Number: 26127-08-2

Molecular Formula: C₁₁H₂₁ClO

Molecular Weight: 204.739

Accurate Mass: 204.128092

Percentage Composition: C 64.53%; H 10.34%; Cl 17.32%; O 7.81%

Use/Importance: Used in chiral synthesis of α -methyl- α -amino acids

Boiling Point: Bp_{0.4} 72-74°

Optical Rotation: $[\alpha]_{\text{D}}^{25} -187.8$ (c, 1.2 in CH₂Cl₂)

Aldrich: 34991-7

>>**Derivative:** 3-Methylbutanoyl

Synonym(s): Methyl isovaleate. validol. FEMA 2669

CAS Registry Number: 16409-46-4

Molecular Formula: C₁₅H₂₈O₂

Molecular Weight: 240.385

Accurate Mass: 240.20893

Percentage Composition: C 74.95%; H 11.74%; O 13.31%

Use/Importance: Flavouring ingredient with a bitter, wood-like taste

Physical Description: Oil

Boiling Point: Bp₂₂ 140-146°

>>**Derivative:** 2-Hydroxypropanoyl

Synonym(s): Menthyl lactate. FEMA 3748

CAS Registry Number: 59259-38-0

Molecular Formula: C₁₃H₂₄O₃

Molecular Weight: 228.331

Accurate Mass: 228.172545

Percentage Composition: C 68.38%; H 10.59%; O 21.02%

Use/Importance: Flavouring ingredient

Physical Description: Cryst.

Melting Point: Mp 38-40°

>>**Variant:** (1*R*,3*S*,4*R*)-form

Synonym(s): (+)-Isomenthol

CAS Registry Number: 23283-97-8

Extra CAS Registry Numbers(s): 15356-70-4

Molecular Formula: C₁₀H₂₀O

Molecular Weight: 156.267

Accurate Mass: 156.151415

Percentage Composition: C 76.86%; H 12.90%; O 10.24%

Physical Description: Cryst. (MeOH)

Melting Point: Mp 82.5°

Boiling Point: Bp 218°

Optical Rotation: $[\alpha]$