



>>Entry Name: (4-Fluorophenyl)oxirane, 9CI

Synonym(s): 1-(Epoxyethyl)-4-fluorobenzene, 8CI. *p*-Fluorostyrene oxide

CAS Registry Number: 18511-62-1

Structure by analogy with (2-Fluorophenyl)oxirane, [HVV49-J](#)

Molecular Formula: C₈H₇FO

Molecular Weight: 138.141

Accurate Mass: 138.048093

Percentage Composition: C 69.56%; H 5.11%; F 13.75%; O 11.58%

>>Variant: (*R*)-form

CAS Registry Number: 134356-73-3

Molecular Formula: C₈H₇FO

Molecular Weight: 138.141

Accurate Mass: 138.048093

Percentage Composition: C 69.56%; H 5.11%; F 13.75%; O 11.58%

Physical Description: Liq.

Optical Rotation: $[\alpha]_{\text{D}}^{20} -17.8$ (c, 1.07 in CHCl₃)

>>Variant: (*S*)-form

CAS Registry Number: 134356-74-4

Molecular Formula: C₈H₇FO

Molecular Weight: 138.141

Accurate Mass: 138.048093

Percentage Composition: C 69.56%; H 5.11%; F 13.75%; O 11.58%

Physical Description: Liq.

Optical Rotation: $[\alpha]_{\text{D}}^{20} +16.7$ (c, 1.03 in CHCl₃)

>>Variant: (±)-form

CAS Registry Number: 53631-23-5

Molecular Formula: C₈H₇FO

Molecular Weight: 138.141

Accurate Mass: 138.048093

Percentage Composition: C 69.56%; H 5.11%; F 13.75%; O 11.58%

Boiling Point: Bp₁₄ 92°

Refractive Index: n_D²⁵ 1.5074

References:

Pews, R.G., *J.A.C.S.*, 1967, **89**, 5605-5608, (*synth*)

Nieduzak, T.R. *et al.*, *Tetrahedron: Asymmetry*, 1991, **2**, 113-122, (*synth, pmr, ir, ms*)

Pedragosa-Moreau, S. *et al.*, *J.O.C.*, 1996, **61**, 7402-7407, (*synth, resoln, pmr, cmr*)