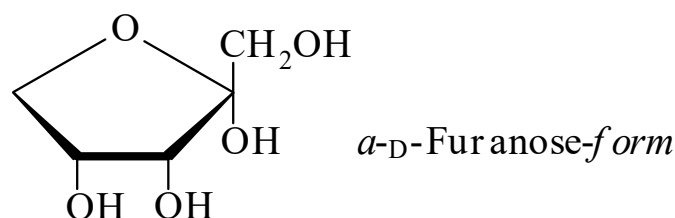




>>Entry Name: *erythro*-2-Pentulose, 9CI

Synonym(s): Ribulose. Riboketose. Adonose. Erythropentulose. Arabulose. Arabinulose. Araboketose



CAS Registry Number: 5556-48-9

Related CAS Registry Numbers(s): 2922-69-2 136332-88-2

Molecular Formula: C₅H₁₀O₅

Molecular Weight: 150.131

Accurate Mass: 150.052825

Percentage Composition: C 40.00%; H 6.71%; O 53.28%

>>Variant: D-form

CAS Registry Number: 488-84-6

Molecular Formula: C₅H₁₀O₅

Molecular Weight: 150.131

Accurate Mass: 150.052825

Percentage Composition: C 40.00%; H 6.71%; O 53.28%

Use/Importance: An early prod. in plant photosynth.

Optical Rotation: $[\alpha]_D^{21}$ -16.3 (H₂O)

Fluka: 83890

Sigma: R6375

>>Derivative: 2-Nitrophenylhydrazone

CAS Registry Number: 6155-41-5

Melting Point: Mp 168-169°

Optical Rotation: $[\alpha]_D$ -48.3 (c, 0.32 in MeOH)

Sigma: R9375

>>Derivative: 5-Phosphate

CAS Registry Number: 4151-19-3

Molecular Formula: C₅H₁₁O₈P

Molecular Weight: 230.111

Accurate Mass: 230.019157

Percentage Composition: C 26.10%; H 4.82%; O 55.62%; P 13.46%

Use/Importance: Intermed. in the oxidative metabolism of glucose in yeast and animal tissue

Physical Description: Cryst. + 2H₂O

Optical Rotation: $[\alpha]_D^{26}$ +16.5 (H₂O)

>>Derivative: 1,5-Diphosphate

CAS Registry Number: 24218-00-6

Extra CAS Registry Numbers(s): 2002-28-0

Molecular Formula: C₅H₁₀O₁₁P₂

Molecular Weight: 308.075

Accurate Mass: 307.969839

Percentage Composition: C 19.49%; H 3.27%; O 57.13%; P 20.11%

Use/Importance: A substrate for the key photosynthetic enzyme, ribulose-bisphosphate carboxylase (EC 4.1.1.39)

Physical Description: No phys. props. reported

Other Data: In equilib. with 16% covalent hydrate in aq. soln. at 25°.