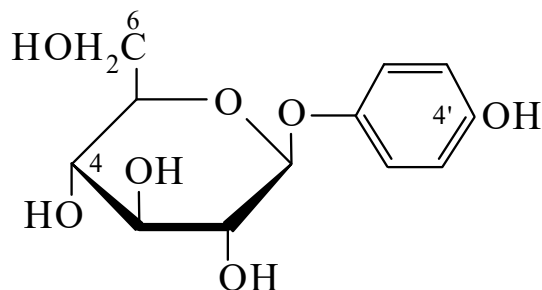




>>Entry Name: Arbutin

ENTRY UNDER REVIEW

Synonym(s): 4-Hydroxyphenyl β -D-glucopyranoside, 9Cl, 8Cl. Hydroquinone-glucose. Arbutoside. Ericolin



CAS Registry Number: 497-76-7

Molecular Formula: C₁₂H₁₆O₇

Molecular Weight: 272.254

Accurate Mass: 272.089605

Percentage Composition: C 52.94%; H 5.92%; O 41.14%

Biological Source: Glucoside in pear leaves (*Pyrus communis*). Widespread in the Ericaceae, also found in many other plants

Use/Importance: Antibacterial, diuretic agent. Hydrol. of Arbutin and oxidn. of the resultant 1,4-benzenediol is responsible for leaf blackening in many dead plants

Melting Point: Mp 142-143°

Optical Rotation: $[\alpha]_D^{18}$ -60.34 (H₂O)

Calculated Log P Data: Log P -1.83 (calc)

UV: [neutral] $\lambda_{\max}$ 291 () (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 294 () (EtOH) (Berdy)

Hazard & Toxicity: Exp. reprod. and teratogenic effects (v. large doses)

Fluka: 10960

Rare Chemicals Library: S57928-9

Sigma: A4256

>>Derivative: 2-Ac

Synonym(s): 2-*O*-Acetylarbutin. Isopyroside

CAS Registry Number: 15794-91-9

Molecular Formula: C₁₄H₁₈O₈

Molecular Weight: 314.291

Accurate Mass: 314.10017

Percentage Composition: C 53.50%; H 5.77%; O 40.73%

Biological Source: Constit. of *Vaccinium vacillans* and *Viburnum wrightii*

Physical Description: Cryst.

Melting Point: Mp 172-174°

Optical Rotation: $[\alpha]_D^{22}$ -22. $[\alpha]_D$ -21.2 (c, 0.9 in MeOH)

>>Derivative: 6-Ac

Synonym(s): 6-*O*-Acetylarbutin. Pyroside

CAS Registry Number: 10338-88-2

Molecular Formula: C₁₄H₁₈O₈

Molecular Weight: 314.291

Accurate Mass: 314.10017

Percentage Composition: C 53.50%; H 5.77%; O 40.73%

Biological Source: Constit. of immature pear (*Pyrus communis*) and mountain cranberry (*Vaccinium vitis-idaea*)

Melting Point: Mp 214-216°

Optical Rotation: $[\alpha]_D^{23}$ -58.8 (c, 2.0 in H₂O)

>>Derivative: Penta-Ac

CAS Registry Number: 14698-56-7

Molecular Formula: C₂₂H₂₆O₁₂

Molecular Weight: 482.44

Accurate Mass: 482.14243

Percentage Composition: C 54.77%; H 5.43%; O 39.80%

Melting Point: Mp 146°

Optical Rotation: $[\alpha]_D^{20}$ -28.18 (Me₂CO)