Molecular Formula: $C_{12}H_{16}O_5S$
Molecular Weight: 272.321
Accurate Mass: 272.071845
Percentage Composition: C 52.93%; H 5.92%; O 29.38%; S 11.78%
Physical Description: Needles (EtOH)
Melting Point: Mp 156-157°
Optical Rotation: $[\alpha]_D^{20}$+258 (c, 0.6 in Py)

>>**Derivative:** Ph glycoside, tetra-Ac
Synonym(s): Phenyl 2,3,4,6-tetra-*O*-acetyl-1-thio-α-D-glucopyranoside

CAS Registry Number: 13992-16-0

Molecular Formula: $C_{20}H_{24}O_9S$
Molecular Weight: 440.47
Accurate Mass: 440.114105
Percentage Composition: C 54.54%; H 5.49%; O 32.69%; S 7.28%
Physical Description: Cryst. (Et_2O/hexane)
Melting Point: Mp 90-91°
Optical Rotation: $[\alpha]_D^{22}$+153.8 (c, 1.8 in $CHCl_3$). $[\alpha]_D^{25}$+8.5 (c, 0.5 in EtOH)

>>**Variant:** β-D-Pyranose-form

CAS Registry Number: 7534-35-2
Molecular Formula: $C_6H_{12}O_5S$
Molecular Weight: 196.224
Accurate Mass: 196.040545
Percentage Composition: C 36.73%; H 6.16%; O 40.77%; S 16.34%

>>**Derivative:** 2,3,4,6-Tetra-Ac
Synonym(s): 2,3,4,6-Tetra-*O*-acetyl-1-thio-β-D-glucopyranose

CAS Registry Number: 19879-84-6

Molecular Formula: $C_{14}H_{20}O_9S$
Molecular Weight: 364.373
Accurate Mass: 364.082805
Percentage Composition: C 46.15%; H 5.53%; O 39.52%; S 8.80%
Melting Point: Mp 113-114°
Optical Rotation: $[\alpha]_D^{20}$–2.1 (c, 2.8 in $C_2H_2Cl_4$). $[\alpha]_D^{20}$+3.6 (c, 1.07 in CH_2Cl_2)
Aldrich: 10447-7
Sigma: T8388

>>**Derivative:** Penta-Ac
Synonym(s): Penta-*O*-acetyl-1-thio-β-D-glucopyranoside

Molecular Formula: $C_{16}H_{22}O_{10}S$
Molecular Weight: 406.41
Accurate Mass: 406.09337
Percentage Composition: C 47.29%; H 5.46%; O 39.37%; S 7.89%
Melting Point: Mp 119-121°
Optical Rotation: $[\alpha]_D$ +11 ($CHCl_3$)

>>**Derivative:** 1-Benzoyl, 2,3,4,6-tetra-Ac
Synonym(s): 2,3,4,6-Tetra-*O*-acetyl-1-*O*-benzoyl-1-thio-β-D-glucopyranoside

CAS Registry Number: 6767-60-8

Molecular Formula: $C_{21}H_{24}O_{10}S$
Molecular Weight: 468.481
Accurate Mass: 468.10902
Percentage Composition: C 53.84%; H 5.16%; O 34.15%; S 6.84%
Melting Point: Mp 126°
Optical Rotation: $[\alpha]_D^{20}$–12.4 (c, 2.73 in $C_2H_4Cl_2$)