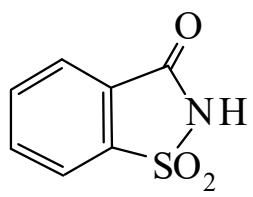
>>**Entry Name: Saccharin,** USAN
ENTRY UNDER REVIEW
Synonym(s): 1,2-Benzisothiazol-3(2*H*)-one 1,1-dioxide, 9CI. Benzoic sulfimide. *o*-Benzosulfimide. Benzosulfinide. *o*-Benzoylsulfimide. *o*-Sulfobenzoic imide. Garantose. Hermesetas. Sweeta. E 954. FEMA 2998



CAS Registry Number: 81-07-2
Related CAS Registry Numbers(s): 6155-57-3 6381-91-5

Molecular Formula: $C_7H_5NO_3S$
Molecular Weight: 183.187
Accurate Mass: 182.999014
Percentage Composition: C 45.90%; H 2.75%; N 7.65%; O 26.20%; S 17.50%
Use/Importance: All salts intensely sweet. Widely-used sweetening agent. Used as 25% aq. soln. of Na salt for detn. of Tl; extraction-separation of Ag. Permitted in foods at levels of 80-1200 ppm in EU
Physical Description: Cryst. (H_2O)
Melting Point: Mp 224°
Solubility: Spar. sol. H_2O, EtOH, Me_2CO; sl. sol. Et_2O, $CHCl_3$
pKa Value: pK_{a1} 1.31 (25°, 0.2*M* KCl/HCl)
Calculated Log P Data: Log P 0.52 (uncertain value) (calc)
Other Data: Sweetness approx. 300 x sucrose
Hazard & Toxicity: Possible human carcinogen (IARC classification, 1987). LD_{50} (mus, orl) 17000 mg/kg. Exp. carcinogenic data. Exp. reprod. and teratogenic effects

Aldrich: 10918-5
Fluka: 12475
Rare Chemicals Library: S27211-6

>>**Derivative:** Na salt
Synonym(s): Saccharin sodium, USAN. Sucaryl

CAS Registry Number: 128-44-9

Melting Point: Mp 228.8-229.7°
Hazard & Toxicity: Possible human carcinogen (IARC classification, 1987). LD_{50} (rat, orl) 14200 mg/kg. Exp. carcinogen. Exp. reprod. and teratogenic effects

>>**Derivative:** Ca salt (2:1)
Synonym(s): Saccharin calcium, USAN

CAS Registry Number: 6485-34-3

>>**Derivative:** Oxime

CAS Registry Number: 51674-07-8
Molecular Formula: $C_7H_6N_2O_3S$
Molecular Weight: 198.202
Accurate Mass: 198.009913
Percentage Composition: C 42.42%; H 3.05%; N 14.13%; O 24.22%; S 16.18%
Melting Point: Mp 208-210 dec.°

>>**Derivative:** Benzoyl

CAS Registry Number: 37952-93-5
Molecular Formula: $C_{14}H_9NO_4S$
Molecular Weight: 287.295
Accurate Mass: 287.025229
Percentage Composition: C 58.53%; H 3.16%; N 4.88%; O 22.28%; S 11.16%
Melting Point: Mp 250 dec.°