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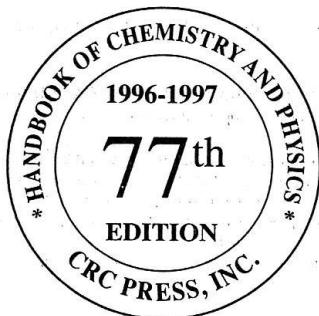


Faculdade São Bernardo

Professor: Wagner Alves Moreira

CRC Handbook of Chemistry and Physics

A Ready-Reference Book of Chemical and Physical Data



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PHYSICAL CONSTANTS OF ORGANIC COMPOUNDS (continued)

No.	Name Synonym	Mol. Form. Mol. Wt.	CAS RN mp/°C	Merck No. bp/°C	Beil. Ref. den/g cm ⁻³	Solubility n_D
9194	2,3-Phenazinediamine 2,3-Diaminophenazine	$C_{12}H_{10}N_4$ 210.24	655-86-7 264	2960 sub	4-25-00-03028	bz 4; EtOH 4
9195	Phenazine, 2-methyl- Tolazine	$C_{13}H_{10}N_2$ 194.24	1016-94-0 118.5	350	5-23-08-00475	eth 4; EtOH 4; chl 4
9196	Phenazinium, 1-hydroxy-5-methyl-, hydroxide, inner salt Pyocyanine	$C_{13}H_{10}N_2O$ 210.24	85-66-5 133 dec	7965	5-24-04-00100	H ₂ O 2; EtOH 3; eth 1; ace 3
9197	1-Phenazinol Hemipyocyanine	$C_{12}H_8N_2O$ 196.21	528-71-2 158	4564 sub	5-23-12-00297	H ₂ O 2; EtOH 2; bz 3; os 4
9198	Phenmedipham Carbamic acid, (3-methylphenyl)-, 3- [(methoxycarbonyl)amino]phenyl ester	$C_{18}H_{16}N_2O_4$ 300.31	13684-63-4 143	7199		
9199	Phenol Hydroxybenzene	C_6H_6O 94.11	108-95-2 40.9	7206 181.8	4-06-00-00531 1.0545 ⁴⁵	H ₂ O 3; EtOH 3; eth 4; ace 5 1.5408 ⁴¹



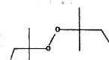
STRUCTURAL FORMULAS OF ORGANIC COMPOUNDS (continued)

In numeric order as they occur in the Table of Physical Constants of Organic Compounds

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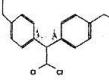
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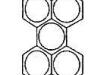
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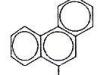
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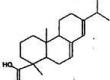
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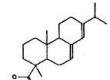
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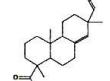
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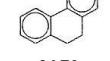
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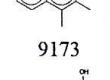
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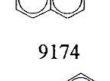
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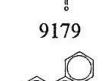
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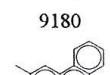
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CHEMICALS, DRUGS, AND BIOLOGICALS

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Atomic weights	inside back cover

Monograph number

Title

Chemical Abstracts
Registry Number

Chemical Abstracts Name

Percentage
composition

Literature
references

9571. α -Tocopherol. [59-02-9] (2R)-3,4-Dihydro-2,5,7,8-tetramethyl-2-[(4R,8R)-4,8,12-trimethyltridecyl]-2H-1-benzopyran-6-ol; (+)-2,5,7,8-tetramethyl-2-(4',8',12'-trimethyltridecyl)-6-chromanol; *R,R,-R*- α -tocopherol; *d*- α -tocopherol; 5,7,8-trimethyltocol; Optovit; Tocovital. $C_{29}H_{50}O_2$; mol wt 430.70. C 80.87%, H 11.70%, O 7.43%. Most bioactive of the

naturally occurring forms of vitamin E, *q.v.* Richest sources are green vegetables, grains, and oils, particularly palm, safflower and sunflower oils. Isoln from wheat germ: H. M. Evans *et al.*, *J. Biol. Chem.* **113**, 319 (1936). Structure: E. Fernholz, *J. Am. Chem. Soc.* **59**, 1154 (1937); **60**, 700 (1938). Synthesis of *dl*-form: P. Karrer *et al.*, *Helv. Chim. Acta* **21**, 520, 820 (1938); F. Bergel *et al.*, *J. Chem. Soc.* **1938**, 1382. Total synthesis of all 8 stereoisomers: N. Cohen *et al.*, *Helv. Chim. Acta* **64**, 1158 (1981). Clinical trial in Alzheimer's disease: M. Sano *et al.*, *N. Engl. J. Med.* **336**, 1216 (1997); to improve immune function in healthy elderly: S. N. Meydani *et al.*, *J. Am. Med. Assoc.* **277**, 1380 (1997). Review of bioavailability from vitamin E supplements: M. G. Traber, *BioFactors* **10**, 115-120 (1999). Review of clinical trials in heart disease: W. A. Pryor, *Free Radical Biol. Med.* **28**, 141-164 (2000).

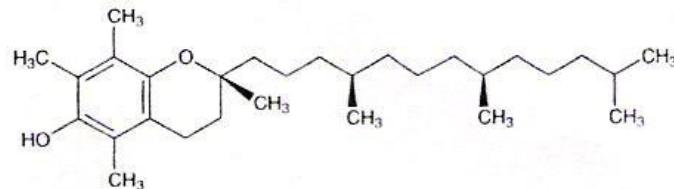
Alternate names and/or trademarks (capitalized) of title compound

Molecular weight

Molecular formula

Chemical information

Biological,
pharmacological,
etc. information



Structure

Derivative Compound Registry Number

Physical data for title compound

Transparent needles, mp 2.5-3.5°. $[\alpha]_{D}^{25} -3.0^{\circ}$ (benzene); $[\alpha]_{D}^{25} +0.32^{\circ}$ (ethanol).

Acetate. [58-95-7] Spondyvit. $C_{31}H_{52}O_3$; mol wt 472.74. Light yellow oil. Crystallized at -30° as needle-like crystals, mp 26.5-27.5°. $[\alpha]_{D}^{25} +0.25^{\circ}$ ($c = 10$ in chloroform); $[\alpha]_{D}^{25} +3.2^{\circ}$ (in ethanol).

Alternate names and/or trademarks (capitalized) of the derivative compound

dl- α -Tocopherol acetate. [52225-20-4] *dl- α -Tocopheryl acetate; Detulin; Ephynal; Eusovit; Evion.* Comprehensive description: B. C. Rudy, B. Z. Senkowski, *Anal. Profiles Drug Subs.* 3, 111-126 (1974). Pale yellow, viscous liquid. mp -27.5°. $d_{4}^{21.3} 0.9533$. $bp_{0.01} 184^{\circ}$; $bp_{0.025} 194^{\circ}$; $bp_{0.3} 224^{\circ}$. $n_{D}^{20} 1.4950-1.4972$. uv max (cyclohexane): 285.5 nm. Practically insol in water. Freely sol in acetone, chloroform, ether. Less readily sol in alc.

Derivatives of title compound

Non-medical use

Derivative Compound Literature references

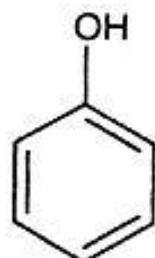
USE: As an antioxidant in vegetable oils and shortening.
THERAP CAT: Vitamin E supplement.
THERAP CAT (VET): Vitamin E supplement.

Physical data for derivative

Therapeutic category (in humans)

Therapeutic category (veterinary)

7323. Phenol. [108-95-2] Carbolic acid; phenic acid; phenylic acid; phenyl hydroxide; hydroxybenzene; oxybenzene. C_6H_6O ; mol wt 94.11. C 76.57%, H 6.43%, O 17.00%. Obtained from coal tar, or made by fusing sodium benzenesulfonate with NaOH, or by heating monochlorobenzene with aq NaOH under high pressure. The crystalline article of commerce contains at least 98% phenol. Review of mfg processes: A. Dierichs, R. Kubicka, *Phenole und Basen, Vorkommen und Gewinnung* (Akademie-Verlag, Berlin, 1958) 472 pp; *Faith, Keyes & Clark's Industrial Chemicals*, F. A. Lowenheim, M. K. Moran, Eds. (Wiley-Interscience, New York, 4th ed., 1975) pp 612-623. Use in treatment of spasticity: D. E. Garland *et al.*, *Clin. Orthop.* **165**, 217 (1982); *eidem*, *Arch. Phys. Med. Rehab.* **65**, 243 (1984). Review of use in pain relief: K. M. Wood, *Pain* **5**, 205-229 (1978). Review of toxicology: H. Babich, D. L. Davis, *Regul. Toxicol. Pharmacol.* **1**, 90-109 (1981). Toxicity: W. B. Deichmann, S. Witherup, *J. Pharmacol. Exp. Ther.* **80**, 233 (1944). Review: C. Thurman in *Kirk-Othmer Encyclopedia of Chemical Technology* vol. **17** (Wiley-Interscience, New York, 3rd ed., 1982) pp 373-384.



Colorless, acicular crystals or white, crystalline mass. Characteristic odor, somewhat sickeningly sweet and acrid with a sharp and burning taste. *Poisonous and caustic!* Prone to redden on exposure to air and light, hastened by presence of alkalinity. d 1.071. When free from water and cresols it congeals at 41° and melts at 43°. Ultrapure material mp 40.85°. The commercial product contains an impurity which raises the mp. bp 182°. Flash pt, closed cup: 175°F (79°C). n_D^{41} 1.5425. pKa at 25° = 10.0. pH of aq solns ~6.0. It is liquefied by mixing with ~8% water. One gram dissolves in ~15 ml water, 12 ml benzene; very sol in alcohol, chloroform, ether, glycerol, carbon disulfide, petrolatum, volatile and fixed oils, aq alkali hydroxides. Almost insol in petr ether. LD₅₀ orally in rats: 530 mg/kg (Deichmann, Witherup). *Keep well closed and protected from light. Do not handle with bare hands.*

ELEMENTOS DO RELATÓRIO

Um relatório tem como função **organizar**, por meio de registros **escritos**, as **informações, dados, pesquisas, resultados e conclusões** de um trabalho. Esta organização deve ser feita de forma clara, **detalhada e cuidadosa**, para que quem esteja **lendo** possa entender e até mesmo **repetir** o que foi feito.

Todo relatório deve ter sempre o estilo **IMPESSOAL**, utilizando – se **voz passiva** no passado, pois se relata algo que **já foi feito**. Por exemplo, no lugar de “*eu pesei uma massa de*”, utilize expressões do tipo “*a massa da amostra foi determinada*” ou, “*determinou – se a massa da amostra...*”.

A seguir são listados os principais itens que um relatório deve conter no próprio corpo do modelo de relatório.

MUITO CUIDADO COM O EMPREGO DA PALAVRA **ATRAVÉS** do termo **O MESMO!**

Estudo do bico de Bunsen

- Pesquisa no Merck Index
- Número monográfico, nomes adicionais, referencias da literatura, propriedades (ponto de fusão e ponto de ebulição ao nível do mar (760 mmHg), dados de toxidez), cuidados e usos dos seguintes compostos: propano, butano, ácido clorídrico e nitrato de potássio.
- Trazer digitado no corpo do relatório da aula intitulada LAMPARINA na próxima aula.