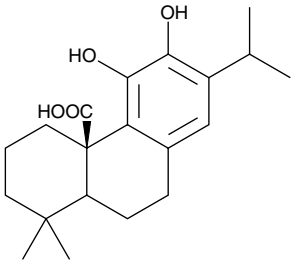
Product Information

Carnosic Acid

Item No. 89820

CAS Registry No.:	3650-09-7
Formal Name:	1,3,4,9,10,10aS-hexahydro-5,6-dihydroxy-1,1-dimethyl-7-(1-methylethyl)-4aR(2H)-phenanthrenecarboxylic acid
Synonyms:	Rosamox™, RoseOx®, Salvin
MF:	$C_{20}H_{28}O_4$
FW:	332.4
Purity:	≥95%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid
UV/Vis.:	λ_{max}: 284 nm



Laboratory Procedures

For long term storage, we suggest that carnosic acid be stored as supplied at -20°C. It should be stable for at least two years.

Carnosic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the carnosic acid in the solvent of choice. Carnosic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of carnosic acid in these solvents is approximately 30 mg/ml.

Carnosic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, carnosic acid should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Carnosic acid has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Carnosic acid is an active diterpene found in rosemary (*R. officinalis*) and common sage (*S. officinalis*). Its antioxidant properties include inhibition of lipid peroxidation and scavenging of peroxyl radicals.[1] Carnosic acid has been shown to be cytotoxic towards various human cancer cell lines, reducing cell viability to 13-30% 48 hours after application at a concentration of 6.25 µg/ml.[2]

References

1. Aruoma, O.I., Halliwell, B., Aeschbach, R., *et al.* Antioxidant and pro-oxidant properties of active rosemary constituents: Carnosol and carnosic acid. *Xenobiotica* **22**, 257-268 (1992).
2. Yesil-Celiktas, O., Sevimli, C., Bedir, E., *et al.* Inhibitory effects of rosemary extracts, carnosic acid and rosmarinic acid on the growth of various human cancer cell lines. *Plant Foods Hum. Nutr.* **65(2)**, 158-163 (2010).

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