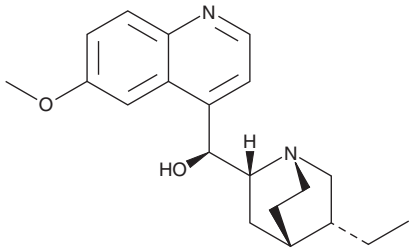
PRODUCT INFORMATION

Hydroquinidine

Item No. 22295

CAS Registry No.:	1435-55-8
Formal Name:	10,11-dihydro-6'-methoxy-cinchonan-9S-ol
Synonyms:	Dihydroquinidine, (+)-Hydroquinidine
MF:	$C_{20}H_{26}N_2O_2$
FW:	326.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 233 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Hydroquinidine is supplied as a crystalline solid. A stock solution may be made by dissolving the hydroquinidine in the solvent of choice, which should be purged with an inert gas. Hydroquinidine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of hydroquinidine in these solvents is approximately 1, 25, and 30 mg/ml, respectively.

Hydroquinidine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, hydroquinidine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Hydroquinidine has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hydroquinidine is an alkaloid and derivative of the antiarrhythmic agent quinidine that decreases heart rate variability.[1-3] It increases the length of the sinus cycle and prolongs QRS duration and ventricular repolarization in anesthetized dogs.[2] It has also been imprinted on microspheres as a pseudo-template molecule for recognition of cinchona alkaloids.[3] Formulations containing hydroquinidine have been studied for use in treatment of Brugada syndrome, which is a genetic disorder characterized by ventricular fibrillation and a risk of sudden death.[4]

References

1. Chimienti, M., Regazzi, M.B., La Rovere, M.T., *et al.* Comparison of the effectiveness of dihydroquinidine and quinidine on ventricular ectopy after acute and chronic administration. *Cardiovasc. Drugs Ther.* **2(5)**, 679-686 (1988).
2. Chézalviel, F., Weissenburger, J., Ertzbischoff, O., *et al.* Comparison of the cardiac electrophysiological effects of flecainide and hydroquinidine in anesthetized dog: Concentration-response relationship. *J. Cardiovasc. Pharmacol.* **15(1)**, 50-56 (1990).
3. Zhou, Q., He, J., Tang, Y., *et al.* A novel hydroquinidine imprinted microsphere using a chirality-matching N-acryloyl-L-phenylalanine monomer for recognition of cinchona alkaloids. *J. Chromatogr. A.* **1238**, 60-67 (2012).
4. Hermida, J.S., Denjoy, I., Clerc, J., *et al.* Hydroquinidine therapy in Brugada syndrome. *J. Am. Coll. Cardiol.* **43(10)**, 1853-1860 (2004).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM