

Drug Status Report

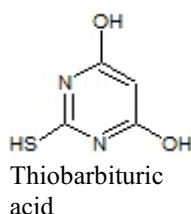
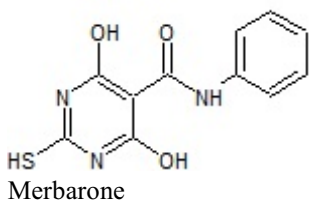
Drug: Merbarone

Drug Name Status: Merbarone is the common name

Other Names: NSC 336628

Chemical Name: Hexahydro-4,6-dioxo-N-phenyl-2-thioxo-5-pyrimidinecarboxamide

Chemical structure:



Molecular Formula: C₁₁H₉N₃O₃S

Pharmacological class / Application: antineoplastic agent

International status:

US: Barbiturates and thiobarbiturates are listed on Schedules II, III and IV to the Controlled Substances Act. The inclusion of derivatives of these substances appears to be tied to the derivatives' pharmacological action. A depressant effect on the CNS is required for inclusion of a barbituric acid derivative. Merbarone is not mentioned on the DEA website.

United Nations: Thiobarbiturates are not listed on the Yellow List - List of Narcotic Drugs under International Control nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: Item 2 of Schedule IV is, "Thiobarbiturates, their salts and derivatives." There are currently four substances listed in this item including thiobarbituric acid.

Merbarone has been reported¹ to be a potential antitumor agent and several clinical trials have been conducted with the substance. The synthesis of this and several other closely related substances, some of which have been claimed to be potentially useful as pesticides, has been

¹ Brewer AD, Minatelli JA, Plowman J, Paull KD, Narayanan VL. Biochem Pharmacol. 1985 Jun 1;34(11):2047-50.

reported². Brewer and Minatelli prepared merbarone in one step by reacting 2-thiobarbituric acid with phenylisocyanate. Merbarone is therefore a derivative of thiobarbituric acid.

Recommendation: Merbarone is included in item 2 of Schedule IV and is a controlled substance.

October 20, 2008 (Revised November 10, 2008)

² AD Brewer and JA Minatelli, US Patent 4,634,707 (January 6, 1987).