

Drug Status Report

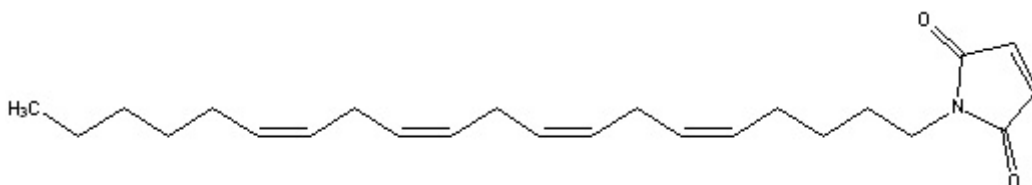
Drug: N-arachidonyl maleimide

Drug Name Status: N-arachidonyl maleimide is the common name.

Chemical Name: 1-(5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraen-1-yl-1H-pyrrole-2,5-dione

Other Names: NAM

Chemical structure:



Molecular Formula: $C_{24}H_{35}NO_2$

Pharmacological class / Application: Monoacylglycerol lipase inhibitor

International status:

US: N-arachidonyl maleimide is not listed on any of the schedules to the CSA and is not mentioned on the DEA website.

United Nations: N-arachidonyl maleimide is not listed on the Yellow List - List of Narcotic Drugs under International Control. The substance is not listed on the Green List - List of Psychotropic Substances under International Control.

Canadian Status: N-arachidonyl maleimide is a selective monoacylglycerol lipase (MAGL) inhibitor which prevents the metabolic inactivation of 2-arachidonoylglycerol (2-AG) and increases the potency of 2-AG¹. While the structure of N-arachidonyl maleimide is similar to some cannabinoid related substances, there is no evidence in the scientific literature to indicate that N-arachidonyl maleimide displays agonistic activity at the cannabinoid receptors and thus the substance is not included under Item 1 of Schedule II to the CDSA.

Recommendation: N-arachidonyl maleimide is not included in any of the Schedules to the CDSA and is not considered a controlled substance.

April 7th, 2010.

¹Burston, JJ. *et al.* (2008) N-arachidonyl maleimide potentiates the pharmacological and biochemical effects of the endocannabinoid 2-arachidonoylglycerol through inhibition of monoacylglycerol lipase, *J. Pharmacol. Exp. Ther.* **327**:546–553.