

## Drug Status Report

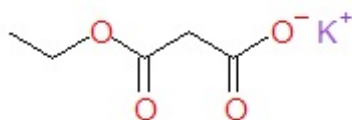
**Drug:** Potassium ethyl malonate

**Drug Name Status:** Potassium ethyl malonate is the common name

**Chemical Name:** Ethyl malonate, potassium salt

**Other Names:** Potassium 3-ethoxy-3-oxo-propanoate; propanediodic acid, monoethyl ester, potassium salt; Malonic acid, monoethyl ester, potassium salt; Ethyl potassium malonate

**Chemical structure:**



**Molecular Formula:** C<sub>5</sub>H<sub>7</sub>KO<sub>4</sub>

**Pharmacological class / Application:** Fine chemical

**International status:**

US: The substance is not listed on the schedules to the CSA and is not mentioned on the DEA website.

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

Canadian Status: Potassium ethyl malonate is used as a reagent in organic synthesis<sup>1,2</sup> and is commonly used as an intermediate in the synthesis of pharmaceuticals having a quinolone structure, for example the  $\beta$ -lactones and  $\beta$ -lactams<sup>3,4</sup>. Potassium ethyl malonate is not listed on the CDSA and is not structurally similar to any of the substances listed in the Schedules to the CDSA.

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<sup>1</sup>Magano, J. *et al.* (2008) Expeditious, large scale preparation of ethyl (R)-5-methyl-3-oxo-octanoate via a cross Claisen reaction between N-acyl oxazolidinone derivatives and the magnesium enolate of potassium ethyl malonate. *Tetrahedron Lett.* **49**: 2956-2959.

<sup>2</sup>Lee, JH. *et al.* (2007) The decarboxylative Blaise reaction, *J. Org. Chem.* **72**:10261-10263.

<sup>3</sup>Sbardella, G *et al.* (2004) New 6-nitroquinolones: synthesis and antimicrobial activities, *Il Farmaco*: 59:463-471.

<sup>4</sup>Box, VGS. *et al.* (1991) The synthesis of  $\beta$ -lactones and  $\beta$ -lactams from malonates and malonamides, *Heterocycles*, **32**:245-251.

Recommendation: Potassium ethyl malonate is not included in the Schedules to the CDSA and is not considered a controlled substance.

January 19<sup>th</sup>, 2010.