Drug Status Report

**Drug**: Thiofentanil

**Drug Name Status**: Thiofentanil is the common name.

**Chemical Name**: 4-[(1-Oxopropyl)phenylamino]-1-[2-(2-thienyl)ethyl]-4-piperidinecarboxylic acid methyl ester

**Chemical structure**:

![Chemical structure of Thiofentanil](image)

**Molecular Formula**: C_{22}H_{28}N_{2}O_{3}S

**CAS-RN**: 60771-38-2

**Pharmacological class / Application**: Fentanyl

**International status**:

US: Thiofentanil is not currently listed on the US Controlled Substances Act 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 nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: Thiofentanil is used as an analgesic\(^1\) and is not currently listed in the Schedules to the CDSA. A review of the current family of fentanyls revealed that substances included under item 16 of Schedule I to the CDSA all contain the following root structure,

![Root structure of fentanyls](image)

R=ethyl group substituted variously at the 1 and 2 postion
R\(_1\)=hydrogen, methoxymethyl or carboxylate alkyl ester
R\(_2\)=phenyl or substituted phenyl
R\(_3\)=alkyl
R\(_4\)=hydrogen or alkyl

and that pharmacological activities of the substances were not considered in the review process.

Thiofentanyl contains the root structure common to the fentanyls and is therefore considered to be included under item 16 of Schedule I to the CDSA under the heading “Fentanyls, their salts, derivatives, and analogues and salts of derivatives and analogues, including:”.

Recommendation: Thiofentanyl is included under item 16 of Schedule I to the CDSA and is a controlled substance.

July 14th 2010