Drug Enforcement Administration
Diversion Control Division
Drug & Chemical Evaluation Section

1-[3-(Trifluoro-methyl)-phenyl]piperazine

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(Street Names: "TFMPP" or "Molly". Often found in combination with BZP: "A2", "Legal E" or "Legal X")

Introduction:

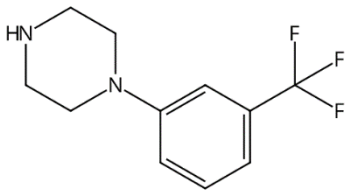
1-[3-(Trifluoro-methyl)-phenyl]piperazine (TFMPP) is an industrial chemical. It is often abused in combination with benzylpiperazine (BZP), a schedule I controlled substance. The Drug Enforcement Administration (DEA) temporarily controlled TFMPP in 2002 as a schedule I hallucinogen under the Controlled Substances Act (CSA) because of its abuse potential and lack of accepted medical use or safety. However, based on the scientific and medical evaluation conducted by the Food and Drug Administration (FDA) and the National Institute on Drug Abuse (NIDA), the Department of Health and Human Services (DHHS) did not recommend control of TFMPP. Accordingly, TFMPP was no longer controlled under the CSA after March 18, 2004. Recently, there has been an escalation in the abuse of TFMPP in the United States as evidenced by the increasing encounters of this substance by law enforcement officials in various states and the District of Columbia.

Licit Uses:

TFMPP is used as an intermediate in chemical synthesis. It has no known medical use in the United States.

Chemistry:

TFMPP is an N-monosubstituted piperazine derivative available as either base or the hydrochloride salt. The base form is a slightly viscous yellowish liquid. The hydrochloride salt is a white solid. TFMPP base is an irritant. The structure of TFMPP is shown below.



Pharmacology:

Some pharmacological effects of TFMPP include rate-depressant effects, prevention of isolation-induced behavioral deficit, anxiolytic (high doses), anti-aggressive effects, locomotor inhibition, hyperthermia, respiratory depression, interference with circadian system, and hypophagia.

Experimental evidence suggests that TFMPP has some 3,4-methylenedioxymethamphetamine (MDMA)-like effects in animals. In rats, TFMPP generalizes (a maximum response of 77%) to the stimulus cue of MDMA. TFMPP also produces anxiety-like responses, alters thermoregulation, and has weak effects on the cardiovascular system. Like MDMA, TFMPP is a serotonin releasing agent.

Self-reported information indicates that TFMPP causes hallucinations in man. Some abusers describe TFMPP as a mild hallucinogen and report feeling mild, pleasant and mellow after ingesting TFMPP. In addition, some abusers stated that BZP enhances the effects of TFMPP.

Illicit Uses:

TFMPP is being promoted as a legal alternative to MDMA at raves (all-night dance parties) as TFMPP or "Molly" and is often sold in combination with BZP as "ecstasy", or "A2", "legal E" or "legal X" in order to enhance its spectrum of effects. TFMPP may be abused alone for its hallucinogenic effects. TFMPP is generally administered orally as either powder, tablets or capsules. Other routes of administration include smoking and snorting.

User Population:

Youth and young adults are the main abusers of TFMPP.

Illicit Distribution:

According to DEA's National Forensic Laboratory Information System (NFLIS) Drug database, which collects scientifically verified data on drug items and cases submitted to and analyzed by federal, state, and local forensic laboratories, TFMPP was first reported in 2001. Annual number of reports of TFMPP to NFLIS-Drug peaked in 2009 at 4,587 and then declined, with only 18 in 2020 and seven in 2021. A total of over 17,800 reports of TFMPP have been submitted to NFLIS-Drug.

Control Status:

TFMPP is currently not controlled under the CSA.

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section; Fax 571-362-4250, Telephone 571-362-3249, or Email DPE@dea.gov.