

## 1-[3-(TRIFLUORO-METHYL)-PHENYL]PIPERAZINE

(Street Names: TFMPP or Molly;

Often found in combination with BZP: A2, Legal E, or Legal X)

### **Introduction:**

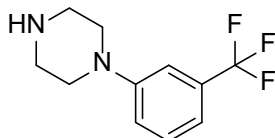
1-[3-(Trifluoro-methyl)-phenyl]piperazine (TFMPP) is an industrial chemical. It is often abused in combination with benzylpiperazine (BZP), a schedule I controlled substance. The Drug Enforcement Administration (DEA) temporarily controlled TFMPP in 2002 as a schedule I hallucinogen under the Controlled Substances Act (CSA) due to 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 and National Institute on Drug Abuse, the Department of Health and Human Services did not recommend control of TFMPP. Accordingly, TFMPP was no longer controlled under the CSA after March 18, 2004. While law enforcement encounters of TFMPP have declined from its peak in 2009, TFMPP continues to be abused within the United States.

### **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 that is available as either the base or hydrochloride salt. The base form is a slightly viscous yellowish liquid, whereas 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 effects (at 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 described 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 promoted as a legal alternative to MDMA at raves (all-night dance parties) and referred to as TFMPP or "Molly." It is often sold in combination with BZP as "ecstasy," "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:**

DEA's National Forensic Laboratory Information System (NFLIS) Drug database collects scientifically verified data on drug items and cases submitted to and analyzed by federal, state, and local forensic drug laboratories. NFLIS-Drug received approximately 17,900 reports of TFMPP since its first report in 2001, with 4 reports in 2022, 3 in 2023, and 7 in 2024 (reports still pending).

### **Control Status:**

TFMPP is not controlled under the CSA.