Drug Enforcement Administration
Diversion Control Division
Drug & Chemical Evaluation Section

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DEA/DC/DOE

N-PROPIONITRILE CHLORPHINE

(Other name: Cychlorphine)

Introduction:

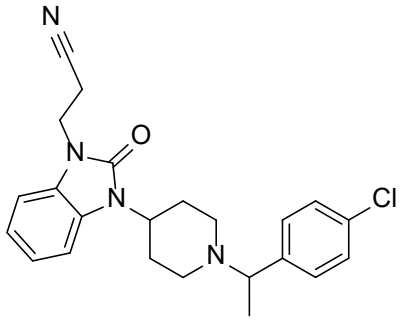
N-Propionitrile chlorphine is a synthetic opioid that appeared on the United States illicit drug market in 2024 amidst an unprecedented epidemic of opioid misuse. *N*-Propionitrile chlorphine has been identified in forensic exhibits and toxicology reports, either alone or in combination with other substances, such as heroin and fentanyl. Adverse health effects associated with the abuse of synthetic opioids include profound sedation, respiratory depression, and death. The availability of synthetic opioids continues to pose an imminent hazard to public safety.

Licit Uses:

N-Propionitrile chlorphine is not approved for medical use in the United States. *N*-Propionitrile chlorphine has no industrial use.

Chemistry:

N-Propionitrile chlorphine is chemically known as 3-(3-(1-(1-(4-chlorophenyl)ethyl)piperidin-4-yl)-2-oxo-2,3-dihydro-1*H*-benzimidazol-1-yl)propanenitrile. The CAS for *N*-propionitrile chlorphine is 6449-60-1. The chemical structure for *N*-propionitrile chlorphine is shown below:



Pharmacology:

N-Propionitrile chlorphine shares a similar mechanism of action with other opioids, such as fentanyl. *N*-Propionitrile chlorphine binds to and activates the mu-opioid receptor (MOR). Consistent with other MOR agonists, *N*-propionitrile chlorphine is expected to produce several pharmacological effects, including analgesia, euphoria, and respiratory depression. Pre-clinical studies in rodents have shown that *N*-propionitrile chlorphine, like other opioids, produced analgesic effects and fully substituted for the discriminative stimulus effects of morphine. There are no clinical studies for *N*-propionitrile chlorphine; however, consistent with other synthetic opioids, *N*-propionitrile chlorphine is expected to produce psychoactive effects in humans.

Illicit Uses:

N-Propionitrile chlorphine is abused for its psychoactive effects, likely in the same manner as other synthetic opioids. As a result, this substance is increasingly detected in illicit drug mixtures, paraphernalia, and overdose cases.

DEA's Toxicology Testing Program (DEA TOX) is a surveillance program that aims to detect new psychoactive substances in the United States. DEA TOX has detected *N*-propionitrile chlorphine in 44 fatal overdose cases since 2025. In addition, several states have reported overdose fatalities associated with *N*-propionitrile chlorphine.

N-Propionitrile chlorphine has also been co-detected in toxicology cases with other substances including other opioids (primarily fentanyl), stimulants, and designer benzodiazepines, among others.

User Population:

Toxicological data suggest that the user population likely to abuse *N*-propionitrile chlorphine is similar to the population abusing illicit and prescription opioids.

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 participating federal, state, and local forensic drug laboratories. NFLIS-Drug received the first report of *N*-propionitrile chlorphine in 2022. *N*-Propionitrile chlorphine was reported once in 2024, 106 times in 2025 (reports still pending) and 89 times thus far in 2026 (reports still pending). Of the reports submitted to NFLIS-Drug to date, approximately 73% (144) reports identified *N*-propionitrile chlorphine alone and approximately 27% (53) of the reports co-reported *N*-propionitrile chlorphine with other substances. The top three substances co-reported with *N*-propionitrile chlorphine are fentanyl, heroin, and cocaine.

Control Status:

N-Propionitrile chlorphine is not a controlled substance under the Controlled Substances Act. If intended for human consumption, *N*-propionitrile chlorphine may be considered a controlled substance analogue as defined in 21 U.S.C. 802(32) and be treated as a schedule I controlled substance for the purpose of Federal law pursuant to 21 U.S.C. 813.

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.