ASSURANCE LABORATORIES

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Isotonitazene (ISO) Testing (LC/MS/MS)

What is isotonitazene?

Over the past several years, there has been an increasing trend of death caused from synthetic opioids. Synthetic opioid-involved death rates increased by over 15% from 2018 to 2019 and accounted for nearly 73% of all opioid-involved deaths in 2019. In 2020 through April of 2021, more than 100,000 deaths from overdose occurred which was the highest in U.S. history. Of the 100,000, more than 60% of the deaths involved synthetic opioids[1]. Among the latest non-fentanyl opioids to be detected, are the drugs referred to as "nitazenes".

Nitazenes date back to early day pharmaceutical development of alternatives to morphine. However, the risk of taking these medications was too high and they were found to be not suitable for use. With increased regulations on fentanyl and other schedule 1 drugs, a high demand of illicitly used opioid analogs has triggered the development of "nitazenes" once again. Most nitazenes are found to be in combination with other drugs, benzodiazepines and fentanyls mostly.

Members of the "Nitazene" Family *

Desnitroisotonitazene	Metodesnitazene (Metazene)
Etonitazene	Metonitazene
Etazene	Protonitazene
Isotonitazene	Butonitazene

*This is not an exclusive list of all nitazene substances

Isotonitazene (also referred to as "iso"), is the prototypical, most frequently encountered member of the "nitazenes" that is taken by itself. Isotonitazene is an extremely potent agonist and is structurally unrelated to fentanyl or traditional opioids. It first appeared in Canada and Europe in March 2019. By July 2019, isotonitazene was found in biological samples in the United States and has since been identified in over 250 drug overdose deaths. In Wisconsin and Illinois, Istonitazene alone is believed to have contributed to more than 40 deaths in Cook county and Milwaukee county in the first 7 months of 2020[3].

The exact risks associated with the use of isotonitazene, as well as other "nitazenes" is unknown largely but they do have significant potential to cause great harm due to their more efficacious response when compared to morphine and fentanyl.

Assurance Laboratories is committed to the safety and compliance of patients and will continue to provide additional "nitazene" compounds to our menu as we see them emerge in our community.

1. Hazelden Betty Ford Spring webinar, Fentanyl and the Evolving Opioid Epidemic. March 2022.
2. The Rise and Fall of Isotonitazene and Brorphine: Two Recent Stars in the Synthetic Opioid Firmament. Marthe M. Vandeputte, Alex J. Krotulski, Donna M. Papsun, et.al. July 2021
3. What Should You Know About Nitazenes? Daniel R. Gerard, MS, RN, NRP March 2022