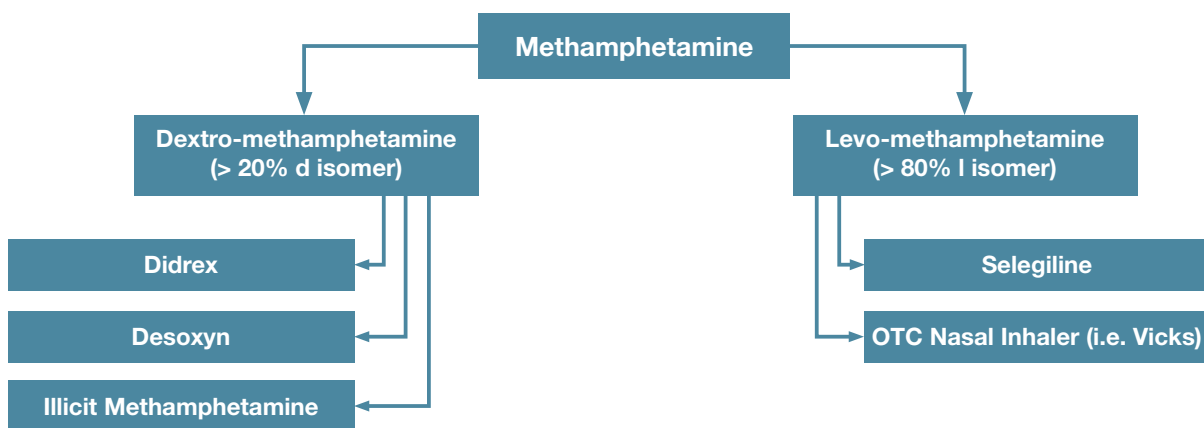


METHAMPHETAMINE

Methamphetamine occurs as two isomers (mirror image isomeric compounds): dextro-methamphetamine (d) and levo-methamphetamine (l). The d-form is a powerful and highly addictive central nervous system (CNS) stimulant used largely as an illicit drug of abuse. The l-form lacks CNS activity and has a lower abuse potential. Methamphetamine is present in many drugs used for treatment of the following conditions: hyperactivity disorders, obesity, Parkinson's disease, and nasal congestion. Routine testing methods for methamphetamine do not have the ability to distinguish between the two isomers.^{1,3,4} Precision Diagnostics offers further testing of a methamphetamine positive to show the percentage of each isomer.

Per SAMHSA guidelines, the following have been clinically proven to result in a positive for methamphetamine within the ranges of the isomer percentages listed below.^{1,2,4}



Methamphetamine readily metabolizes into amphetamine when consistent with the d isomer, while methamphetamine consistent with the l isomer is a poor metabolizer to amphetamine.² There is no reverse metabolism; therefore, amphetamine does not metabolize to methamphetamine.¹

Per clinical research, it has been found that in urine, methamphetamine can be detected 24-60 hours after a single dose and up to 144 hours, or approximately 6 days, with chronic use. In oral fluid, methamphetamine can be detected for at least 24 hours after single use and 3 days or more with chronic use.⁵

Precision Diagnostics offers methamphetamine testing for both urine and oral fluid, as well as d/l isomer testing for urine. The d/l isomer testing can only be ordered in conjunction with urine methamphetamine testing.

**A Precision Diagnostics trained Clinical Support Specialist can
assist with further review of your patient's results**

(800) 635-6901 Option 2

References:

1. Medical Review Officer Manual for Federal Workplace Drug Testing Programs. Effective October 1, 2010; 53-56, 74-76. https://www.samhsa.gov/sites/default/files/workplace/mro-guidance-manual-oct2017_2.pdf
2. Fitzgerald, R. L., Ramos, J. M., Bogema, S. C., Polis, A., (1988) Resolution of Methamphetamine Stereoisomers in Urine Drug Testing: Urinary Excretion of R(-)-Methamphetamine Following Use of Nasal Inhalers. *Journal of Analytical Toxicology*. 12(5): 255-259.
3. Baselt, Randall C., *Disposition of Toxic Drugs and Chemicals in Man*, 10th ed. Biomedical Publications, Seal Beach, CA. 2014; 1263-1267.
4. White, R. M. and Black, M. L., *Pain Management Testing Preference*, AACCC Press, Washington DC. 2007; 25-47.
5. Cody, JT, Schwarzhoff, R. (1993) Interpretation of methamphetamine and amphetamine enantiomer data. *Journal of Analytical Toxicology*. 17: 23-25.
6. Verstraete, Alain G. (2004) Detection Times of Drugs of Abuse in Blood, Urine, and Oral Fluid. *The Drug Monit*. 26(2): 200-205.

Precision Diagnostics is a leader in clinical laboratory testing and medication adherence monitoring. Specializing in qualitative and quantitative drug testing, our innovative state-of-the art technology provides new levels of data visibility and pricing transparency.

Precision's role is to ensure each participant, from the patient to the provider and the payor, benefits from our continued commitment to the principles of value-based care and medically necessary test utilization.

Precision Diagnostics

4215 Sorrento Valley Blvd.

San Diego, CA 92121

(800) 635-6901

info@precisiondxlab.com

precisiondxlab.com



innovation



integrity



insights



outcomes