



Qualitative Detection of:

- Amphetamines
 - Methamphetamine
 - MDA/MDMA
- Antidepressants
 - Tricyclic and nontricyclic
- Antipsychotics
- Benzodiazepines
- Cannabinoids
- Opiates
 - Buprenorphine
 - 6-monoacetylmorphine
 - Codeine
 - Fentanyl
 - Hydrocodone
 - Ketamine
 - Oxycodone
 - Oxymorphone
 - Meperidine
 - Methadone
 - Nalbuphine
 - Naloxone
 - Propoxyphene
 - Tramadol
- Stimulants
 - Caffeine
 - Cocaine/Benzoyllecgonine
 - Cotinine (Nicotine metabolite)
 - Methylphenidate
 - PCP

The laboratories at The Ohio State University Wexner Medical Center are accredited/licensed by the following agencies:

- Centers for Medicare & Medicaid Services (CMS) – CLIA: 36D0329129
- College of American Pathologists – CAP: 1637801
- AABB
- Centers for Medicare & Medicaid Services (CMS) – CLIA: 36D1080238
- College of American Pathologists – CAP: 7210235

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OHIO STATE WEXNER MEDICAL CENTER
UNIVERSITY REFERENCE LABORATORIES

Umbilical Cord Tissue Toxicology Testing

THE NEXT GENERATION IN NEONATAL DRUG SCREENING



THE OHIO STATE UNIVERSITY
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THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER



THE NEED

- Substance abuse by pregnant women is one of the most frequently missed diagnoses in perinatal medicine.¹
- Only 5-10 percent of women self-report illicit drug use, while universal toxicology testing of high-risk populations reveals significantly higher usage levels of 10-40 percent.²
- Newborns have experienced a threefold increase in neonatal abstinence syndrome (NAS) hospitalization over the last decade.³
- Every 25 minutes, a baby is born suffering from opioid withdrawal.⁴
- Conventional specimens can be difficult to collect. Opiate-exposed newborns pass meconium more slowly, delaying analysis and intervention.

The drug epidemic requires better identification, faster turnaround and more reliable results. Ohio State Wexner Medical Center provides the next-generation testing you need today.

THE ADVANTAGES

Earlier identification of at-risk infants affords immediate treatment, which may reduce neonatal withdrawal symptoms and improve long-term care and prognosis.

- Unlike conventional urine specimens, cord tissue can detect possible drug exposure over the last 20 weeks of pregnancy.
- Sample collection is noninvasive and simple. The cord is collected immediately at birth and there is no need to wait for meconium to pass. Nurses are freed to focus on patient care.
- Samples can be collected immediately after birth and sent for testing as indicated.
- Turnaround time is fast, with final specimen results within 48 hours of receipt.
- This toxicology testing has no impact on parental requests for cord blood storage.
- There is no need for significant investment in equipment. Your team collects the sample; our team provides state-of-the-art analysis and interpretation.

UNDERSTANDING THE RESULTS

The analysis of drugs in umbilical cord tissue (UCT) is intended to assess drug exposure during pregnancy. The presence or absence, deposition, concentration and time frame of detectability for drugs in UCT does not necessarily parallel that of other specimens, such as meconium, newborn urine and maternal urine. Therefore, drugs detected or expected in maternal specimens and other newborns specimens may not match identified drugs in UCT. Drugs administered during labor may be present in UCT. Negative results do not exclude the possibility of drug exposure during pregnancy. Marijuana metabolites are screened by immunoassay and are not confirmed.



CORD TISSUE TESTING PROCESS:

- Following delivery, cut and drain blood from a 6-inch cord segment
- Rinse, dry and place tissue in specimen container
- Store refrigerated and prepare to ship on ice
- Download requisitions forms from [clinicallabs.osumc.edu/Pages/Requisition-Forms.aspx](https://www.osumc.edu/Pages/Requisition-Forms.aspx)
- Seal and provide required identification and paperwork
- Contact courier for pickup
- Expect results delivered electronically within 48 hours of receipt

¹Murphy-Oikonen, J., Montelpare, W., Southon, S., Bertoldo, L., Persichino, N. (2010). Identifying infants at risk for neonatal abstinence syndrome: A retrospective cohort comparison study of 3 screening approaches. *Journal of Perinatal & Neonatal Nursing*, 24(4), 366-372.

²Farst, K., Valentine, J., Hall, R. (2011) Drug testing for newborn exposure to illicit substances in pregnancy: pitfalls and pearls. *International Journal of Pediatrics*, 2011:951616.

³Hall, E., Wexelblatt, S. L., Crowley, M., Grow, J. L., Jasin, L. R., Klebanoff, M. A., McCleod, R. E., Meinen-Derr, J., Mohan, V., Stein, H., Walsh, M. (2014). A multicenter cohort study of treatments and hospital outcomes in neonatal abstinence syndrome. *Pediatrics*, 134(2), e527-e534.

⁴National Institute on Drug Abuse. (2015). Dramatic increases in maternal opioid use and neonatal abstinence syndrome. <https://www.drugabuse.gov/related-topics/trends-statistics/infographics/dramatic-increases-in-maternal-opioid-use-neonatal-abstinence-syndrome>.