

# Drugs of Abuse in Meconium

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**REFERENCE:** Moore CM, Negrusz A: Drugs of abuse in meconium; *Forensic Sci Rev* 7:103–118; 1995.

**ABSTRACT:** The determination of fetal drug exposure is of great importance for the future development of the neonate. Meconium, the first fecal material excreted by the newborn is an excellent depository for drugs to which the fetus has been exposed. Correct diagnosis of drug use during pregnancy allows the child to receive specialized treatment and care, which will aid in learning behavioral development. Meconium analysis is gaining significant credibility as an alternative or an additional sample to neonatal or maternal urine, because meconium provides a longer history of drug use than urine and drug concentrations are higher. Therefore, number of false negative results is decreased. Meconium analysis is a relatively new scientific development. Reported analytical procedures and techniques for drugs and metabolites in meconium are predominantly cocaine-related, although other compounds have been studied. Meconium, a complex matrix, requires pre-treatment and the extraction of drugs using organic solvents and solid-phases is discussed. Preliminary drug screening using predominantly immunoassays and quantitative confirmatory analytical chromatographic methods, are reviewed. Drugs of abuse described include cocaine, amphetamines, phencyclidine, marijuana, opiates, nicotine, benzodiazepines and barbiturates.

**KEY WORDS:** Analytical techniques, confirmatory techniques, drugs of abuse, fetal exposure, meconium analysis, methods of meconium screening.

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