URINE DRUG TEST INFORMATION SHEET
BARBITURATES

Classification: Central nervous system depressants (CNS Depressants)

Background: Barbiturates are a group of drugs that act as central nervous system depressants. Opiates, benzodiazepines and alcohol are also CNS depressants, and like their use, the effect seems to the user as an overall sense of calm. Barbiturates were introduced in 1903, dominating the sedative-hypnotic market for the first half of the 20th century. Unfortunately, because barbiturates have a relatively low therapeutic-to-toxic index and substantial potential for abuse they quickly became a major health problem. Barbiturates are commonly abused for their sedative properties and widespread availability. The introduction of Benzodiazepines in the 1960s, quickly supplanted the barbiturates due to their higher safety index and slightly lower abuse potential. Barbiturates have a high potential for lethal overdose.

Legally Obtained with Prescription as: Amobarbital, Aprobarbital, Butabarbital, Butalbital, Barbital, Meophrobarbital, Methohezital, Pentobarbital, Phenobarbital, Primidone, Secobarbital, Thiopental.

Legally Obtained OTC: None

Metabolism and Detection in Urine: Barbiturates are classified as ultra-short, short, intermediate and long acting depending on how quickly they act and their duration of action. Ultra-short acting, such as thiopental, produce unconsciousness within about a minute of intravenous injection and are used to prepare patients for surgery. These drugs are found in hospital settings only and therefore assumed to have a low abuse potential. Longer acting drugs such as Phenobarbital and Mepobarbital are prescribed (rarely) for the treatment of insomnia, and when taken in the day can aid in anxiety and tension. Barbiturates are rarely prescribed any longer for the treatment of insomnia, anxiety, or tension due to their very high risk of physical dependence and fatal overdose. Due to the structural nature of barbiturates the duration of action does not always correlate well with the biological half life.
**Physiological Effects:** Lowered blood pressure, respiratory depression, fatigue, fever, impaired coordination, nystagmus, slurred speech and ataxia

**Psychological Effects:** Drowsiness, dizziness, unusual excitement, irritability, poor concentration, sedation, confusion, impaired judgment, addiction, euphoria, decreased anxiety and a loss of inhibition

**Toxicity:** Barbiturates are especially more dangerous when abused with alcohol, opiates, and benzodiazepines because they act on the same receptors in the body and therefore potentiate the effect of the drug. Since many drug abusers combine multiple drugs this becomes a dangerously risky game leading to increased sedation, impaired motor coordination, suppressed breathing and other adverse effects that may potentially be lethal. Symptoms of overdose may include: drowsiness, slurred speech, nystagmus, hypotension, ataxia, respiratory depression, CNS depression, hypothermia, cutaneous bullae, coma, cardio respiratory arrest and death. Delayed deaths usually arise from acute renal failure, pneumonia, acute lung injury, cerebral edema, and multiorgan system failure.

**Screen Test:** Performed by Enzyme Multiplied Immunoassay Technique (EMIT)

**Confirmation Test:** Performed by Liquid Chromatography Mass Spectrometry

**Cut off Levels:**
- Screen Test: 200 or 300 ng/mL
- Confirmation Test: 200 or 300 ng/mL

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**Amobarbital**

**Available as:** Amytal, Amylobarbitone (also found in combination with other drugs such as Secobarbital, Amphetamine and Ephedrine)

**Street Names:** Amy’s, Birds, Blue Angels, Blue Birds, Blues, Blue Bullets, Blue Clouds, Blue Devils, Blue Dolls, Blue Heavens, Downers, Blue Velvets

**Prescribed Use:** Hypnotic short term treatment of insomnia, reduces anxiety and provides sedation preoperatively

**Mode of Use:** Capsules to be taken orally, liquid for IV or intramuscular injection

**Appearance:** Light blue capsules, concentrated clear liquid

**Metabolism and Precautions:** Amobarbital is considered an intermediate duration of action barbiturate. Its half life is 15-40 hours (dose dependent) and has a detection window of 2-10 days.
**Butalbital**

**Available as:** Allylybarbital, Allylbarbitone, Itobarbital, Sandoptal, Anolor 300, Bupap, Cephadyn, Dolgic LQ, Dolgic Plus, Esgic-Plus, Esgioc, Fioricet, Fiorinal, Medigesic, Phrenilin, Phrenalin Forte, Promacet, Repan, Sedapap, Zebutal (often found in combination with acetaminophen, caffeine and codeine)

**Street Names:** Blue Devils, Barbs, Blue Birds, Blues, Dollies, Dolls, Downers, Goofballs, Tooties

**Prescribed Use:** Relief of the symptomatic complex of tension or muscle contraction headache

**Mode of Use:** Tablets and capsules intended for oral consumption

**Appearance:** Two-tone and single tone capsules in multiple color combinations (often white and blue), round white or light blue tablets, oblong white tablets

**Metabolism and Precautions:** Butalbital is considered short-acting, physically and psychologically addictive barbiturate. Its half life is 35-88 hours and has a detection window of 2-10 days.

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**Pentobarbital**

**Available as:** Nebutal

**Street Names:** Nembies, Yellow Jackets, Abbots, Mexican Yellows

**Prescribed Use:** Sedative/hypnotic, pre-anesthetic, high-dose barbiturate coma for treatment of increased intracranial pressure, or status epilepticus unresponsive to other therapy

**Mode of Use:** Concentrated liquid for IV or slow intramuscular injection, tablets for oral consumption and rectal suppositories

**Appearance:** Clear liquid, solid yellow capsules

**Metabolism and precautions** Pentobarbital is considered a short-acting barbiturate and may be habit forming. Its half life is 35-88 hours and has a detection window of 2-10 days. Pentobarbital has also been used in physician assisted suicide.
**Phenobarbital**

*Available as:* Luminal, Phenobarbitone

*Street Names:* Purple Hearts, Goof Balls

*Prescribed Use:* Management of generalized tonic-clonic (grand mal) and partial seizures, sedative

*Mode of Use:* Tablets for oral consumption and as a solution for intramuscular and IV injection

*Appearance:* Solid white round tablets, clear liquid

*Metabolism and precautions:* Phenobarbital is an excellent inducer of drug-metabolizing enzymes of the liver and this often results in lowered plasma levels of other drugs. Phenobarbital accumulates very slowly in the brain and has limited metabolism, allowing for the very long half life of 2-6 days. The detection window of this drug is very long and can be up to 3 weeks.

**Secobarbital**

*Available as:* Seconal

*Street Names:* Reds, Red Birds, Red Devils, Lilly, F-40's, Pinks, Pink Ladies, Seggy

*Prescribed Use:* Pre-anesthetic agent, short term treatment of insomnia

*Mode of Use:* Rectal, oral, IV and intramuscular injection

*Appearance:* Red capsules

*Metabolism and Precautions:* Secobarbital is considered a short-acting barbiturate and may be habit forming. Secobarbital may cause severe allergic reactions. Its half life is 22-29 hours and has a detection window of 2-10 days.
Thiopental

Available as: Sodium Pentothol, Thiopentone, Pentothal

Street Names: None

Prescribed Use: Induction of anesthesia, adjunct for intubation in head injury patients, control of convulsive states and treatment of intracranial pressure

Mode of Use: IV injection

Appearance: Powder for reconstitution as a solution for IV injection

Metabolism and Precautions: Thiopental is a short-acting barbiturate with a rapid onset. This drug is also commonly known for its “truth serum” affects during interrogation because it weakens the resolve to the subject and makes them feel more compliant to pressure. This drug is among a list of drugs which have a heightened risk of causing significant patient harm when used in error. The half life for this drug is 6-46 hours and has a detection window of 2-10 days.