

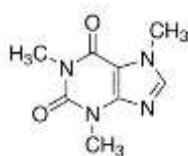
## Caffeine (Anhydrous)

**ALTERNATE NAME:** 1,3,7-trimethylxanthine, Methyltheobromine, 3,7-dihydro-1,3,7-trimethyl-1H-purine-2,6-dione

**CATALOG #:** 2914-5G

**AMOUNT:** 5 g

**STRUCTURE:**



**MOLECULAR FORMULA:** C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub>

**MOLECULAR WEIGHT:** 194.2

**CAS NUMBER:** 58-08-2

**APPEARANCE:** White Powder

**SOLUBILITY:** Water (~16 mg/ml), Ethanol (~15 mg/ml)

**PURITY:** ≥99% by HPLC

**STABILITY:** Caffeine is decomposed by strong bases.

**STORAGE:** Room Temperature, 4 years shelf-life. Solutions in organic solvents (e.g. methanol or ethanol) are stable at 2-8°C for several years.

**DESCRIPTION:** Caffeine is a popular central nervous system (CNS) stimulant. It is a well-studied substrate of Cytochrome P450 enzymes like CYP1A2. Caffeine is taken up by transporters at the blood brain barrier. Its stimulating effects are believed to act through adenosine receptors and monoamine neurotransmitters. It is an adenosine receptor antagonist and adenosine 3',5'-cyclic monophosphate (cAMP) phosphodiesterase inhibitor. It can affect cellular calcium levels, releasing calcium from cellular stores. It has been shown to inhibit cellular DNA repair mechanisms.

**HANDLING:** Protect from air, light and moisture. Do not take internally. Wear gloves and mask when handling!

### RELATED PRODUCTS:

AMMC iodide (Cat#2873)  
Atorvastatin (Cat#2278)  
Erlotinib, (Cat#2048)  
Erlotinib, Hydrochloride Salt (Cat#1588)  
EZSolution™ Gefitinib (Cat#2030)  
Gefitinib (Cat#1589)  
Irinotecan Hydrochloride (Cat#1752)  
Lovastatin (Cat#1692)  
Paclitaxel (Cat#1567)  
Rosuvastatin (Cat#1955)  
Simvastatin (Cat#1693)  
Dextromethorphan (Cat#2912)  
Progesterone (Cat#2913)

**FOR RESEARCH USE ONLY! Not to be used on humans.**