



**SIGMA-ALDRICH**

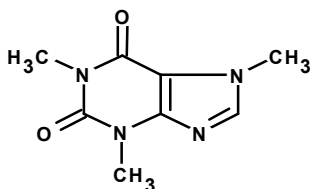
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## Product Information

### Caffeine Sigma Reference Standard

Catalog Number **C1778**  
Lot Number 076K8804  
Store at Room Temperature

CAS RN 58-08-2  
Synonyms: 1,3,7-Trimethylxanthine;  
1*H*-Purine-2,6-dione,3,7-dihydro-1,3,7-trimethyl-



### Product Description

Molecular Formula: C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub>  
Molecular Weight: 194.19

This product meets or exceeds USP specifications (Current through USP 29, Supplement 2), and is traceable to USP Reference Standard lot J1D241.

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Preparation Instructions

Dry a portion at 80 °C for 4 hours before using. Use promptly. Discard unused material.

### Storage/Stability

Store in sealed vial at room temperature.

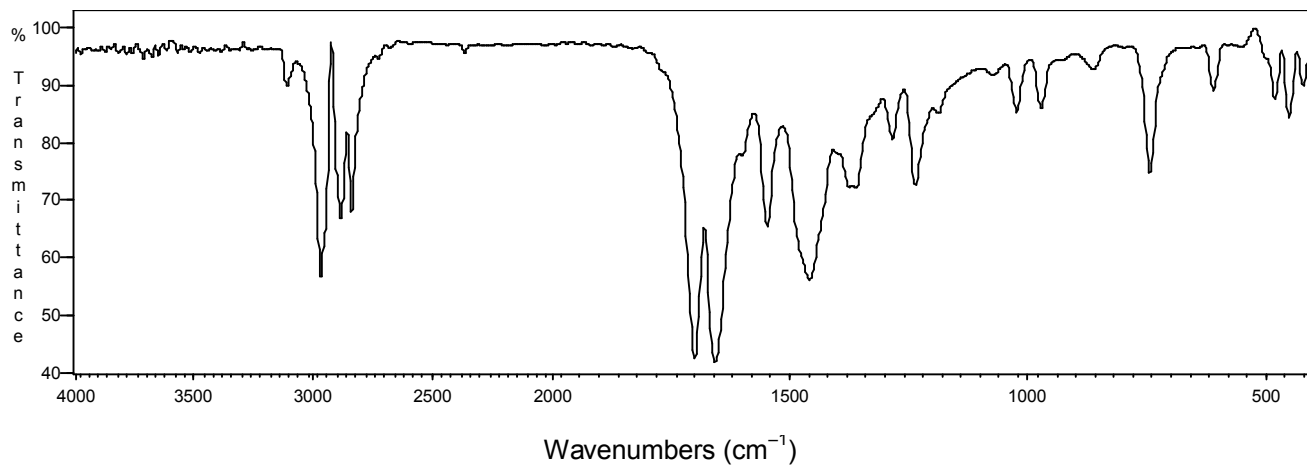
PCS,MAM 01/07-1

TEST	USP 29 SPECIFICATIONS	Result Sigma Reference Standard Lot 076K8804
Infrared absorption spectrum Mineral Oil dispersion <197 M>	compares to standard	conforms to USP RS lot J1D241
Identification B	color change as described	passes
Melting range <741>	between 235 and 239 °C	235.0–237.5 °C
Water Method III <921>	not more than 0.5%	passes
Residue on ignition <281>	not more than 0.1%	passes
Heavy Metals Method II <231>	<0.001%	passes
Readily carbonizable substances <271>	no more color than <i>Matching Fluid D</i>	passes
Organic volatile impurities Method I <467>	meets requirement	Meets requirements
Other alkaloids	no precipitate is formed	passes
Chromatographic Purity	not more than 0.1% of any individual impurity is found and the total of for all impurities is not more than 0.1%	passes
Assay <621>	not less than 98.5% and not more than 101.0% on the anhydrous basis	100.0%

See reverse side for IR spectrum of Sigma Reference Standard.

INFRARED SPECTRUM

Mineral Oil dispersion



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Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.