



CERTIFICATE OF ANALYSIS

PRODUCT NAME : CAFFEINE ANHYDROUS USP	
BATCH NO. : CD-236009	MFG. DATE: OCT 2023
BATCH QTY. : 500KGS	EXP. DATE: SEP 2028

TEST	SPECIFICATION	RESULT
Appearance as per BP/Ph.Eur./USP/FCC	A white or almost white, crystalline powder or granules or Silky, white or almost white crystals, white glistening needles, usually matted together, odourless, bitter in taste. sublimes readily. Its solution are neutral to litmus.	White crystalline powder, odourless, bitter in taste , sublimes readily. Its solution are neutral to litmus.
Solubility as per BP/Ph.Eur./USP/FCC	Sparingly soluble in water, Freely soluble in boiling water, Slightly soluble in ethanol (96%). It dissolves in concentrated solutions of alkali benzoates or salicylates. Sparingly soluble in alcohol , Freely soluble in chloroform, Slightly soluble in ether.	Complies
A) Identification as per BP/Ph.Eur	A: Melting point: 234°C to 239°C B: The Infrared absorption spectrum of sample should be concordant with that of standard preparation of Caffeine WS. E: It complies with the test for loss on drying.	236.1°C Complies Complies
B) Identification as per USP/FCC	A) The Infrared absorption spectrum of sample should be concordant with that of standard preparation of Caffeine WS	Complies
	B) The retention time of the Caffeine peak of the sample solution corresponds to that of the standard solution as obtained in the Assay test.	Complies
Appearance of solution as per BP/Ph.Eur.	The solution S is clear and colourless	Complies
Acidity or alkalinity as per BP/Ph.Eur.	Not more than 0.2 ml of 0.01 M sodium hydroxide is required to change the colour of the indicator to blue.	0.11 ml of 0.01 M sodium hydroxide is required.
Melting Range	Between 235°C to 237.5°C	235.9°C to 237.2°C

www.maplechemicals.ae

No 1604, Aspect Tower, Business Bay, Dubai

+97142399666

info@maplechemicals.ae



Related substances by HPLC as per BP/Ph.Eur.	Impurity-A : NMT 0.10% Impurity-C : NMT 0.10% Impurity-D : NMT 0.10% Impurity-F : NMT 0.10% Unspecified Impurities: NMT 0.10% Total Impurities : NMT 0.1%	BDL Not Detected Not Detected BDL Not Detected BDL
Readily carbonizable substances as per FCC	The colour of solution is no darker than that of Matching Fluid D.	Complies
Other alkaloids as per FCC	No precipitate forms.	Complies
Assay by HPLC as per USP	Not less than 98.5% and not more than 101.0% on anhydrous basis.	99.67%
Chromatographic Purity By HPLC as per USP	Individual Impurities : NMT 0.1%.	0.01%
	Total Impurities : NMT 0.1%	0.02%
Sulfate as per BP/Ph.Eur.	Not more than 500 ppm	Complies
Lead as per FCC	Not more than 1 ppm.	Complies
Loss on drying at 105 °C for 1 hr. as per BP/Ph.Eur.	Not more than 0.5%.w/w	0.24 %
Water Determination as per USP	Not more than 0.5%.	0.21 %
Sulfated ash/Residue on Ignition as per BP/Ph.Eur./USP/FCC	Not more than 0.1% w/w	0.05 %
Assay by potentiometrically as per BP/Ph.Eur.	Not less than 98.5% and not more than 101.5% on dried basis.	99.71%
Additional Test		
Residual Solvent	Chloroform : NMT 60 ppm	Not Detected
Sieve Analysis	Not less than 95.0% passes thr. 30 mesh.	99.32 %
	Not less than 70.0% passes thr. 60 mesh.	78.04 %
	Not less than 60.0% passes thr. 80 mesh.	70.93 %

ANALYZED BY	CHECKED BY	APPROVED BY
CHEMIST	QC HEAD	QA MANAGER

مابل لتجارة الكيماويات ش.ذ.م.م
MAPLE CHEMICALS TRADING LLC
 Dubai - U.A.E

www.maplechemicals.ae

No 1604, Aspect Tower, Business Bay, Dubai

+97142399666

info@maplechemicals.ae