

LAMPIRAN I

Certificate of Analysis



CERTIFICATE OF ANALYSIS

Product	Caffeine Anhydrous	Batch No.	16101999
Reference Standard	BP2016/ EP8.0/ USP38	Mfg Date	10/11/2016
Sampling Date	10/14/2016	Exp Date	10/2020
Report Date	10/18/2016	Product Code	010-01
Country of Origin	China	Quantity	2017kgs

Items	Specifications	Results
Appearance	White crystalline powder	White crystalline powder
Identification: IR HPLC	IR: Conforms to reference spectrum HPLC: Conforms to chromatogram of the standard preparation	Conforms to reference spectrum Conforms to chromatogram of the standard preparation
Melting Point [°C]	234°C – 239°C	236.9°C
Appearance of Solution	Clear and colorless	Clear and colorless
Acidity (0.01 mol/L NaOH, ml)	≤ 0.2	Conform
Chromatographic Purity Single Impurity Total Impurities	≤ 0.10% ≤ 0.1%	0.03% 0.04%
Sulfate	≤ 500ppm	< 500ppm
Heavy Metals (on PB basic)	≤ 0.001%	< 0.001%
Loss on Drying	≤ 0.5%	0.01%
Residue on Ignition	≤ 0.1%	0.02%
Sulphated Ash	≤ 0.1%	0.02%
Assay (on dried basis)	98.5% – 101.5%	99.3%
Residual Solvent (Chloroform)	≤ 60ppm	Conform
Assay (on dried basis) (HPLC)	98.5% – 101%	99.7%
Conclusion	The product is tested in accordance with BP2016/EP8.0/USP381-CEP2003-027-Rev03. The above items meet the requirement.	

Storage: Store in a cool dry area. Do not freeze. Keep away from strong, heat light

The above information is a direct translation of the information provided to NutriVitaShop, from the manufacturer of this product. This Certificate of Analysis should be used for informational purposes and is not intended as substitute for strict quality control analysis by the purchaser of this product.
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LAMPIRAN II

Pembuatan larutan induk dan kurva kalibrasi

Pembuatan larutan induk Kafein

$$\text{Bpj: } \frac{\text{mg}}{\text{L}} = \frac{50 \text{ mg}}{0,10 \text{ L}} = 500 \text{ bpj}$$

Pengenceran 50 bpj: $V1.N1 = V2.N2$
 $V1.500 \text{ bpj} = 50 \text{ ml. } 50 \text{ bpj}$
 $V1 = 5 \text{ ml}$

Pembuatan seri pengenceran:

1. 1 bpj: $V1.N1 = V2.N2$
 $V1.50 \text{ bpj} = 10 \text{ ml. } 1 \text{ bpj}$
 $V1 = 0,2 \text{ ml}$
2. 2 bpj: $V1.N1 = V2.N2$
 $V1.50 \text{ bpj} = 10 \text{ ml. } 2 \text{ bpj}$
 $V1 = 0,4 \text{ ml}$
3. 3 bpj: $V1.N1 = V2.N2$
 $V1.50 \text{ bpj} = 10 \text{ ml. } 3 \text{ bpj}$
 $V1 = 0,6 \text{ ml}$
4. 4 bpj: $V1.N1 = V2.N2$
 $V1.50 \text{ bpj} = 10 \text{ ml. } 4 \text{ bpj}$
 $V1 = 0,8 \text{ ml}$
5. 5 bpj: $V1.N1 = V2.N2$
 $V1.50 \text{ bpj} = 10 \text{ ml. } 5 \text{ bpj}$
 $V1 = 1 \text{ ml}$
6. 6 bpj: $V1.N1 = V2.N2$
 $V1.50 \text{ bpj} = 10 \text{ ml. } 6 \text{ bpj}$
 $V1 = 1,2 \text{ ml}$