Product Specification Sheet

1. Product Description

Product Name:	Caffeine Anhydrous — Bulk Food Grade
Chemical / Common Name:	Caffeine anhydrous (1,3,7-trimethylxanthine)
Synonyms:	Anhydrous caffeine, 1,3,7-trimethylxanthine
Ingredient Statement:	Caffeine
Molecular Formula / Weight:	C8H10N4O2 / 194.19 g/mol
CAS No. / HS Code:	58-08-2 / 2939.30
Grade:	☐ Conventional ☐ Organic ☒ Food Grade ☐ USP / FCC
Country of Origin:	China
Description:	White, odourless crystalline powder with a bitter taste. Assay 98.5 – 101.0 %.

2. Physical & Chemical Characteristics

Parameter	Specification	Method
Appearance	White powder	Organoleptic
Odour & Taste	Odourless; bitter	Organoleptic
Identification	IR conforms to USP Caffeine RS; HPLC retention time corresponds	IR / USP
pH	5.5 – 6.5	USP <791>
Loss on Drying (% w/w)	≤ 10.0	USP <731>
Particle Size / Mesh	≥ 95 % through #40 mesh	USP <786>
Assay (%)	98.5 – 101.0	USP
Residue on Ignition (%)	≤ 0.1	USP <281>
Melting Range (°C)	235 – 237.5	USP <741>
Appearance of Solution	Clear and colourless	USP
Sulphate (ppm)	≤ 500	USP <221>
Related Substances, total (%)	≤ 0.10	USP
Acidity	≤ 0.2 mL of 0.01 M NaOH	USP
Other Alkaloids	No precipitate is formed	USP
Readily Carbonisable Substances	Passes test	USP

3. Contaminants

Parameter	Specification	Method
Total Heavy Metals (ppm)	≤ 10	USP <231>
Lead (Pb) (ppm)	≤ 0.5	USP <232>
Arsenic (As) (ppm)	≤ 1.5	USP <232>
Cadmium (Cd) (ppm)	≤ 0.5	USP <232>
Mercury (Hg) (ppm)	≤ 0.2	USP <232>

4. Microbiological Characteristics

Parameter	Specification	Method
Total Plate Count (CFU/g)	≤ 10,000	USP <2021>
Yeast & Mould (CFU/g)	≤ 1,000	USP <2021>
Coliforms (CFU/g)	≤ 10	USP <2021>
E. coli	Negative	USP <2022>
Salmonella	Negative	USP <2022>
Staphylococcus aureus	Negative	USP <2022>

5. Allergen Declaration

Priority Allergen (Health Canada)	Present in Product	Same Line / Facility
Peanuts	☐ Yes ☒ No	☐ Yes ☐ No
Tree nuts	☐ Yes ☒ No	☐ Yes ☐ No
Sesame seeds	☐ Yes ☒ No	☐ Yes ☐ No
Milk	☐ Yes ☒ No	☐ Yes ☐ No
Eggs	☐ Yes ☒ No	☐ Yes ☐ No
Fish	☐ Yes ☒ No	☐ Yes ☐ No
Crustaceans & molluscs	☐ Yes ☒ No	☐ Yes ☐ No
Soy	☐ Yes ☒ No	☐ Yes ☐ No
Wheat & triticale	☐ Yes ☒ No	☐ Yes ☐ No
Gluten (barley, oats, rye)	☐ Yes ☒ No	☐ Yes ☐ No
Mustard	☐ Yes ☒ No	☐ Yes ☐ No
Sulphites (≥ 10 ppm)	☐ Yes ☒ No	☐ Yes ☐ No

6. Regulatory Status

GMO Status:	☒ Non-GMO ☐ Contains GMO ☐ Not applicable
Irradiation:	☒ Not irradiated ☐ Irradiated
Certifications:	☐ Kosher ☐ Halal ☐ Organic ☐ Vegan ☐ Other: _____
BSE / TSE Statement:	BSE/TSE free (manufacturer declaration).
Standard of Quality:	Tested per USP monograph methods; complies with the specification above.

7. Packaging, Storage & Shelf Life

Uses:	Caffeine source for energy drinks, functional beverages, pre-workout powders and supplements.
Packaging:	Food-grade sealed pouches, repacked from the manufacturer's original packaging.
Storage Conditions:	Store in a well-closed container in a cool, dry place, away from heat, moisture, dust and direct sunlight.
Shelf Life:	60 months from date of manufacture.
Lot Code Format:	YYYYMMDDNN (repack date + sequence), traceable to the manufacturer lot.

8. Quality Assurance Review

Reviewed By (QA): LiquidShop Quality Assurance **Review Date:** 2026-10-08

This document was prepared electronically and reviewed by LiquidShop Quality Assurance. It is valid without a signature.

The information contained in this document is accurate to the best of our knowledge. It is the responsibility of the user to ensure the product is suitable for its intended application and complies with applicable regulations.