

Product Technical Dossier

Product	Coffeine® Caffeine Anhydrous (Natural) from coffee beans
CCL Product Code	P0359

Specification Details

	Specification
Identification	IR infrared absorption
Assay (HPLC)	98.5-101.0%
Appearance	Crystalline Powder
Colour	White
Aroma	Characteristic
Flavour	Characteristic

Sieve Analysis % passed	Min 95% Pass 40 Mesh
Loss on Drying	Max 0.5%
Ash	Max 0.1%
Bulk Density	0.2-0.8 g/ml
Chromatographic Purity - Any Individual Impurity	Max 0.1%
Total Impurity	Max 0.1%
Melting Range	Between 235 – 237.5°C after drying at 80°C for 4 hours
Readily Carbonizable Substances	The solution has no more colour than matching fluid D
Residual Solvents	<2ppm
Organic volatile Impurities	Meets the requirements

Heavy Metal Limits (Periodically tested)

Total Heavy metals	Max 10ppm
Lead (Pb)	Max 3ppm
Cadmium (Cd)	Max 0.5ppm
Mercury (Hg)	Max 0.1ppm
Arsenic (As)	Max 1ppm

Microbiological Limits

Total Viable Count	Max 100cfu/g
Yeasts & Moulds	Max 10cfu/g
E. Coli	Negative/10g
Salmonella	Negative/25g



Additional Technical Information

Raw Material Full Botanical / Chemical Name	<i>Coffea robusta</i> / <i>Coffea arabica</i>
Part Used	Bean
The material is Food Grade	Yes
Solvent used	Methylene Chloride
Country of Origin	India and other coffee producing countries
Country of Manufacture	India, Germany
Solubility in Alcohol	Slightly soluble in ethanol and in ether
Solubility in Water	Sparingly soluble in water, freely soluble in boiling water
Average Molecular weight	194.14g/mol
Molecular Formula	C ₈ H ₁₀ N ₄ O ₂
CAS Number	58-08-2
EC/EINECS Number	200-362-1
Pharmacopeia Standard	USP
Shelf Life from Date of Manufacture	Min 36 months
Suitable for Vegetarians?	Yes
Suitable for Vegans?	Yes
Storage Conditions	This material is to be stored in a tightly sealed bag/container and to be kept in a cool place away from moisture and direct sunlight.

Composition Origin, Function and Percentages

Ingredients	Function	% composition	Source
Caffeine	n/a	100%	Coffee beans

Nutritional Data

Test	Value per 100g
Energy kJ / Kcal	N/A
Fat (g)	NIL
-Of which Saturates (g)	NIL
Carbohydrate (g)	NIL
-Of which Sugars (g)	NIL
Fibre (g)	NIL
Protein (g)	NIL
Salt (g)	NIL

Please note that surveillance testing may mean that not all the parameters stated on this specification are tested for every batch.

The allergen information is supplied by the manufacturer, we have not tested for each individual allergen to ensure they are not present. The information given is based on a documented risk assessment and is accurate to the best of our knowledge. If you intend to make a voluntary "free from" claim on your pack, additional testing may need to be carried out. For technical and labelling guidance, you should always speak to the competent authority for the market or member state in which the final products are placed.

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Allergens	Product Contains YES/NO	Listed Item on Site at Manufacturer YES/NO	Where applicable, is there risk of cross-contamination? YES/NO or N/A
Peanuts and Peanut Derivatives (including possible cross contamination)	No	No	F
Nut and Nut Derivatives <i>Almond (Amygdalus communis L.), Hazelnut (Corylus avellana), Walnut (Juglans regia), Cashew (Anacardium occidentale), Pecan nut (Carya illinoensis (Wangenh.) K. Koch), Brazil nut (Bertholletia excelsa), Pistachio nut (Pistacia vera), Macadamia nut and Queensland nut (Macadamia ternifolia)</i>	No	No	F
Sesame Seeds and Sesame Seed Derivatives	No	No	F
Milk and Milk Derivatives (including lactose)	No	No	F
Egg and Egg Derivatives	No	No	F
Cereals and Derivatives containing OR POTENTIALLY CONTAMINATED WITH Gluten <i>(wheat, wheatgrass, faro, freekeh, spelt, kamut, rye, oats, barley, barleygrass)</i>	No	No	F
Soya and Soya Derivatives	No	No	F
Lupin and Lupin Derivatives	No	No	F
Mustard and Mustard Derivatives	No	No	F
Celery or Celery Derivatives (including Celeriac)	No	No	F
Fish and Fish Derivatives	No	No	F
Molluscs and their Derivatives	No	No	F
Crustaceans and their Derivatives	No	No	F
Sulphur Dioxide and Sulphites (E220, E228) at levels > 10mg/kg or 10mg/litre	No	No	F

A - Risk of contact at source during harvesting and may contain traces

B - Raw material handled on same line as other allergenic materials and may contain traces

C - Raw material handled on same line as other allergenic materials however formal control programme in place to minimise cross contact risk

D - Exempt from labelling according to EU regulations

E - Not handled on the same line

F - Not handled at manufacture site and therefore no risk of cross contamination

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Additives / Contaminants / Dietary Requirements / Intolerances	Product Contains YES/NO	Listed Item on Site at Manufacturer YES/NO	Where applicable, is there risk of cross-contamination? YES/NO or N/A
Additives / E Numbers	No	No	F
Antioxidants	No	No	F
Ethylene Oxide	No	No	F
Gelatine	No	No	F
Flavourings (Artificial / Nature Identical / Natural / Smoked)	No	No	F
Maize / Corn and any Derivatives	No	No	F
Legumes / Pulses	No	No	F
Rice and Rice Derivatives	No	No	F
Added Salt	No	No	F
Added Sugar / artificial or natural sweeteners	No	No	F
Aspartame	No	No	F
BHA / BHT (E320 / E321)	No	No	F
Caffeine	Yes	Yes	this product is caffeine
Colours (Artificial / Nature Identical / Natural / Smoked)	No	No	F
Dextrose	No	No	F
other Seeds and Seed Derivatives (Poppy Seeds, Cotton Seeds, Sunflower Seeds)	No	No	F
Kiwi fruit	No	No	F
Polyols (sugar alcohols)	No	No	F
Grapefruit	No	No	F
Sorbic Acid (E200, E203)	No	No	F
Any other Preservatives	No	No	F
Ethanol	No	No	F
Honey	No	No	F
Lactose	No	No	F
Yeast and Yeast Derivatives	No	No	F
All Animal Products (Beef, Pork, Poultry or other) and Derivatives (which may include growth/yield hormones, antibiotics etc.)	No	No	F
Bovine Products or Derivatives (which may include growth/yield hormones, antibiotics etc.)	No	No	F

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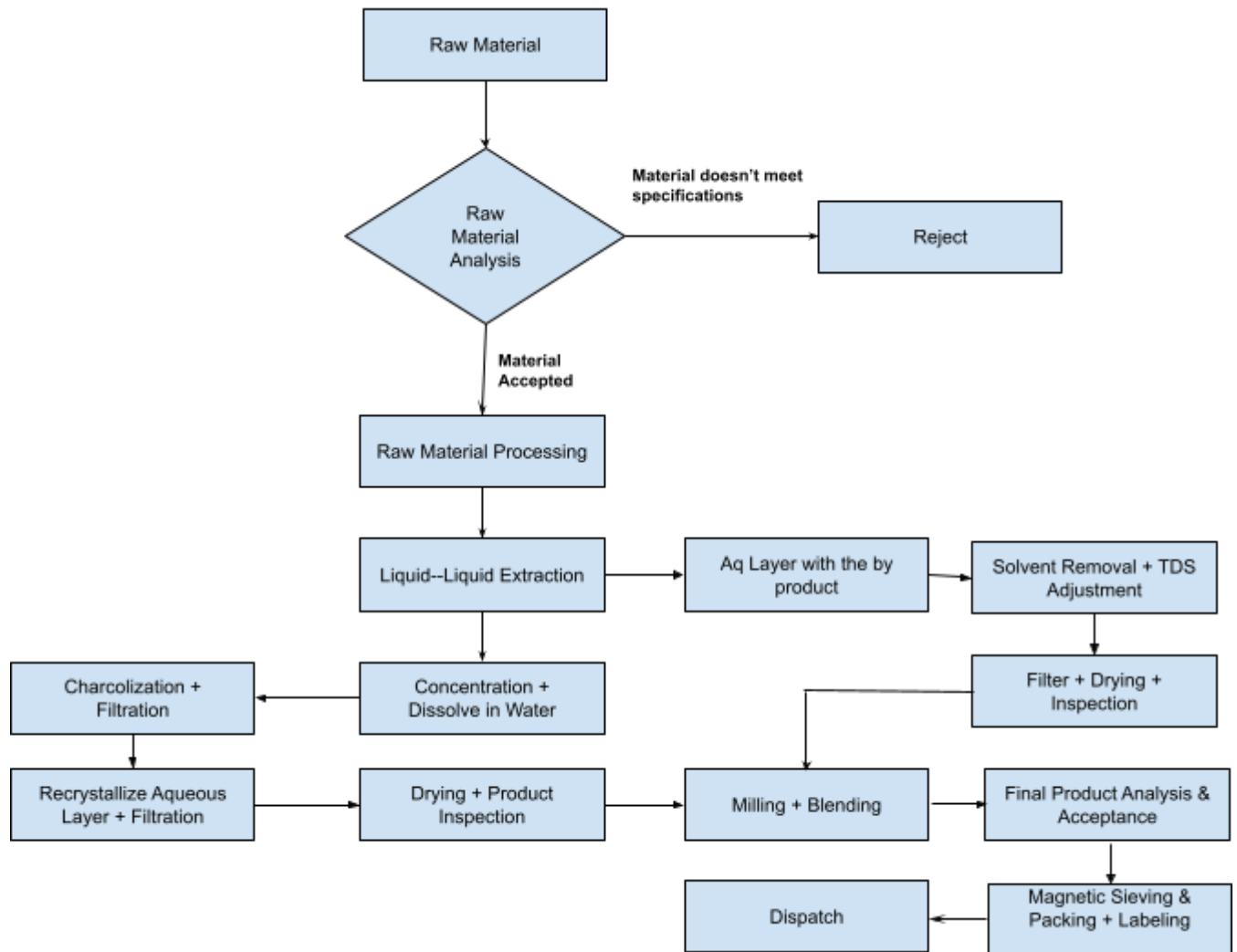
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Compliance Statements

<p>Confirmation of BSE / TSE Status This product complies with all relevant current UK and EU Legislative requirements in regard to Transmissible Spongiform Encephalopathies (TSE) and Bovine Spongiform Encephalopathy (BSE) for human food, and so is free of TSE/BSE.</p>	Yes
<p>Confirmation of GM Status This product is not manufactured from GM raw materials and is therefore not subject to labelling under current regulations.</p>	Yes
<p>Confirmation of Non-Irradiation Status This product, whole or in part, has not been subjected to Ionising Radiation as per European Directives.</p>	Yes
<p>Confirmation of IOC Product Status This product, whole or in part, has not come into contact with any product which is banned by the IOC (International Olympics Committee) and/or WADA.</p>	Yes
<p>Confirmation of Animal Testing Status This product has not been tested on animals in any part of its manufacture in accordance with current regulations.</p>	Yes
<p>Confirmation of Pesticides Status This product complies with the EU max residue limits (MRLs) on pesticides.</p>	Yes
<p>Confirmation of Nanomaterial Status This product does not contain nanomaterials as per relevant EU regulations.</p>	Yes
<p>Confirmation of Food Grade Packaging The packaging used in this product conforms to EU regulations and subsequent amendments on food grade packaging</p>	Yes
<p>Confirmation of Contaminants status This product complies with Commission Regulation (EC) No 1881/2006 wherever applicable</p>	Yes



Product Flow Chart



Material Safety Data Sheet

To download this product's material safety data sheet, please click [here](#) and search for the Cambridge Commodities product code. If there is no MSDS available, please follow the on-screen instructions to request one.

The Information provided in this document is subject to change and the batch specific certificate of analysis should always be referenced.



To be used as per local legislation.

Change History

Version	Change	Customer Notification required Yes / No
1	First Issue	N/A
2	Added Production Flow Chart. The format has also been updated.	NO
3	Changed water to Loss on Drying NMT 0.5%, changed colour to white. Updated format of td	YES
4	General reformat Changed Bulk from 0.22g/ml to 0.35 -0.45 g/ ml	YES
5	Added Mercury, Lead and Cadmium	YES
6	Amended name from Coffeine [™] Caffeine Anhydrous (Natural) to Coffeine [®] Caffeine Anhydrous (Natural), sieve analysis from 100% Pass 30 Mesh to NLT 95% pass 40 Mesh, bulk density from 0.35 -0.45 g/ ml to 0.2-0.8 g/ml, Added IR infrared absorption Added additional technical data and micro testing Added pharmacopeia standard (USP) Updated heavy metal specs and solubility information	YES
7	Changed lead from max 1ppm to max 3ppm, Assay Method from 'on anhydrous basis' to HPLC, pH from "5.5-6.5 (1% aqueous solution)" to ">6.5", confirmed botanical source is <i>Coffea robusta</i> . Updated product flow chart & compliance statements.	YES
8	Added Coffea arabica to raw material used. Removed pH and other alkaloids Updated country of origin and country of manufacture Updated shelf life from 5 years to Min 36 months Added 'periodically tested' note to Heavy metal specs Updated risk rating for caffeine from A to 'this product is caffeine' Added residual solvent information	YES



Document Approval

Originator		Approver	
Anne Stevens Quality Administrator	 15/12/2023 11:55	C White Senior Quality Specialist	 15/12/2023 14:02

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