

Technical Data Sheet

Product Name: Micro-Vita L-Arginine AKG (2:1) 500mesh

Trade Brand: SmartHerb

Technical Data Sheet			
AC Code	SH07024	CAS number	5256-76-8
Molecular formula	C ₁₇ H ₃₈ N ₈ O ₁₁	Molecular weight	530.5g/mol
Origin	China	Source	Semi-Fermentation & Semi-Synthesis
Solvent Used	N/A		
Item	Standard		Analysis Method
Appearance	White to off-white crystalline powder		Visual
Typical Analysis			
Identification	In accordance with standard retention time		HPLC
Specific Rotation	+16.5° ~ +18.5°		Ph. Eur. 2.2.7
Assay	98.0% – 102.0%		HPLC
L-arginine Content	65.5%~69.0%		HPLC
α-ketoglutarate Content	26.5%~29.0%		HPLC
Water determination	≤6.8 %		Ph. Eur. 2.5.12
Solubility	Readily soluble in water and the solution is clear		Visual
pH	5.5 – 7.0		Ph. Eur. 2.2.3
Chlorides	≤0.05 %		Ph. Eur. 2.4.4
Residue on ignition	≤0.2%		Gravimetric
Loss on Drying	≤1.0 %		Ph. Eur. 2.2.32
Particle Size	≥98 % passing through 500 Mesh		Particle Size
Heavy metals			
Heavy metals	≤10mg/kg		ICP-MS
Iron salt	≤10 mg/kg		ICP-MS
Lead (Pb)	≤1.0 mg/kg		ICP-MS
Arsenic (As)	≤1.0 mg/kg		ICP-MS
Cadmium (Cd)	≤1.0 mg/kg		ICP-MS
Mercury (Hg)	≤0.1mg/kg		ICP-MS
Microorganism			
Total Bacterial Count	≤1000 CFU/g		Ph. Eur. 2.6.12
Total Yeast and Mould Count	≤100 CFU/g		Ph. Eur. 2.6.12
Salmonella	Negative		Ph. Eur. 2.6.13
E. coli	Negative		Ph. Eur. 2.6.13
Staphylococcus aureus	Negative		Ph. Eur. 2.6.13
Package	N.W. 25Kgs/fiber drum and two plastic bags inside.		
Shelf life	24 months		
Storage	the product should be sealed storage, prevent insolation, rain drench, be affected with damp, prohibit and poisonous and harmful article mix storage.		

INGREDIENTS

An ingredient is defined in Directive 2000/13/EC on labelling: "ingredient means any substance including additives, used in the production or preparation of a foodstuff and still present in the finished product although possibly in a modified form" i.e. all raw materials to produce the goods.

Please list all ingredients:

Ingredients/material composition	%	Country of origin
L-Arginine Alpha-Ketoglutarate (2:1)	100%	China

ORIGIN

Country of origin of the product: China			
Is a manufacturing process available	☒ YES	☐ NO	
Source of the product:	☐ Animal ☐ Plant ☐ Mineral origin ☐ Synthetic ☒ Biotechnological processing		
please answer the following questions.			
Catalysis By Enzymes			
Name Of Enzyme:	N/A	Sources Of Enzymes:	N/A
Fermentation			
Source: Starting raw materials L-Arginine and α -ketoglutaric acid are produced by microbial fermentation using bacterial strains. L-Arginine Alpha-Ketoglutarate (2:1) crystalline complex is obtained via aqueous salt-forming complexation of the two fermentation-derived raw materials as downstream refining step. No fermentation process is carried out on the final complex.			

GENETICALLY MODIFIED ORGANISMS-GMO

According to EU regulations EC/1829/2003 & EC/1830/2003

According to the EU regulations concerning the traceability and labelling of Genetically Modified Organisms (GMO), and the traceability of food products produced from GMO, we confirm that the product:		
Contains ingredient(s) from Maize and/or Soya origin	☐ YES	☒ NO
Contains no material which contains, consists of or is produced from authorized GMOs in proportion higher than 0,9%. This presence is adventitious or technically unavoidable	☒ YES	☐ NO
is GMO or contains or consists of GMOs	☐ YES	☒ NO
is produced from GMOs or contains ingredients produced from GMOs	☐ YES	☒ NO
Contains ingredient(s) from other potential GMO-risk raw material(s) (rice, beet, cotton ...)	☐ YES	☒ NO
If Yes, please specify: o ingredient: o vegetable origin: o geographic origin:		
Contains no material which contains, consists of or is produced from evaluated GMOs in proportion higher than 0,5%. This presence is adventitious or technically unavoidable	☒ YES	☐ NO
For information about processing aids, is produced or contains ingredient(s) produced	☐ YES	☒ NO

with GMOs or Genetically Modified Microorganisms processing aids (bacteria, yeast...or derived from GMOs or GMMs(including enzymes)		
If yes, please specify:		
We confirm that the ingredient supplied is compliant in all respects with the Regulations N°1829/2003/EC and N°1830/2003/EC where applicable	☒ YES	☐ NO

SUBSTANCES OR PRODUCTS CAUSING ALLERGIES OR INTOLERANCES

According to Regulation(EU)No.1169/2011 as regards of ingredients present in foodstuffs

Allergenic substances (Regulation EU 1169/2011 – Annex II)	Present in finished product	Present in the manufacturing site	Present on the same manufacturing line	Possible cross-contamination
Cereals containing gluten (i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strains)	NO	NO	NO	NO
Crustaceans and products thereof	NO	NO	NO	NO
Eggs and products thereof	NO	NO	NO	NO
Fish and products thereof	NO	NO	NO	NO
Peanuts and products thereof	NO	NO	NO	NO
Soybeans and products thereof	NO	NO	NO	NO
Milk and products thereof (including lactose)	NO	NO	NO	NO
Nuts (almond, hazelnut, walnut, cashew, pecan nut, Brazil nut, pistachio nut, macadamia nut)	NO	NO	NO	NO
Celery and products thereof	NO	NO	NO	NO
Mustard and products thereof	NO	NO	NO	NO
Sesame seeds and products thereof	NO	NO	NO	NO
Sulphur dioxide and sulphites (>10 mg/kg or 10 mg/L expressed as SO ₂)	NO	NO	NO	NO
Lupin and products thereof	NO	NO	NO	NO
Molluscs and products thereof	NO	NO	NO	NO

NON IRRADIATION

According to UE Directive No.1999/2/CE

Has this raw material or one of its ingredients been irradiated or ionised	☐ YES	☒ NO
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We confirm above non-irradiation statement is available	☒ YES
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NANOMATERIAL

According to Regulation(EU)No 1169/2011

Does this raw material contain or can be considered asengineered nanomaterial	☐ YES	☒ NO
Does this raw material have been made with nanotechnology?	☐ YES	☒ NO
Does the product contain nanotechnology as defined by the French decree no.2012-232?	☐ YES	☒ NO

RESIDUAL SOLVENTS

According to UE Directive 2009/32 modified by (UE)2010/59 and CPMP/ICH/283/95Q3C

Does the raw material contain any residual solvent	☐ YES	☒ NO
If yes,please give: percentage and name of each solvent used: level of residual solvents:		
Is the product in compliance with the UE Directive 2009/32	☒ YES	☐ NO
Is the product in compliance with the ICH guidelines	☒ YES	☐ NO

WADA Anti-Doping Statement

Current WADA Prohibited List

Does the product contain any prohibited substances (hormones, anabolic agents, stimulants) listed on WADA Prohibited List?	☐ YES	☒ NO
Is there any risk of cross-contamination with WADA banned substances during production?	☐ YES	☒ NO

FOOD CERTIFICATE

Manufacturer's quality certificates:				
ISO 9001 ☐	HACCP ☐	ISO 14001 ☐	ISO 22000 ☐	☒ OTHER
Is the raw material Food Grade?	☒ YES	☐ NO		
Can the product be used in baby food(Directive 2006/141/CE)?	☐ YES	☒ NO		
Does the product comply with the UE Regulation No231/2012 about additives?	☒ YES	☐ NO		
Is the product complying with a Pharmacopeia monography?	☐ YES	☒ NO		
Is the product complying with the UE Regulation No.1334/2008 about flavourings?	☐ YES	☒ NO		
Was the product used in the European food industry before May 1997?	☒ YES	☐ NO		
If no,could you provide an authorisation (according to Regulation 258/97/EC)?	☐ YES	☐ NO		
Are stability studies available?	☒ YES	☐ NO		

CONTAMINANTS

Is the product conforming to UE regulations No 2023/915 setting maximum levels for certain contaminants in foodstuffs,as amended?	☒ YES	☐ NO
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Contaminants	Tested?	Result
Pesticides (multi-residue)?	YES	Complies with EU 396/2005
Dioxins and dioxin like PCBs?	YES	Complies with EU 915/2023
Heavy metals	YES	Complies (≤ 10 ppm)
PAHs(PAH4)	YES	Complies with EU 915/2023
Benzo[a]pyrens?	YES	Complies with EU 915/2023
Mycotoxins (Aflatoxins, OTA)	YES	Complies with EU 915/2023
3-MCPD	NO	Not applicable
Doping like substances? http://list.wada-ama.org/	NO	Not applicable

FOREIGN BODIES

Which material do you use in order to fight against the foreign bodies			
	Presence?	Test frequency	Where is it located on the process line?
Magnet	YES	Continuous	Raw material intake / processing line
Metal detector	YES	Each batch	Before packaging
Sieve	YES	Continuous	During processing
Filter	YES	Continuous	Extraction / filtration stage
X-ray detection	NO	Not applicable	Not applicable
Other(please specify)	NO	Not applicable	Not applicable

NUTRITIONAL VALUES

Nutritional Composition	☒ Per 100g	☐ Per serving
Energy(kJ/kcal)	1350 kJ / 323 kcal	
Total Fat(g)	<0.1 g	
Total Carbohydrate(g)	<0.1 g	
Fibre(g)	<0.1 g	
Salt(g)	<0.1 g	
Vitamins:	N/A	
Minerals:	N/A	
Remarks: Nutrition Data are obtained by 3 rd party lab; tested on a yearly basis		

TRACEABILITY

Batch size	N/A
Batch definition	A batch is defined as a homogeneous production lot produced under the same conditions
Signification of the batch number by an example	N/A
Marking method (labelling...)	N/A

PACKAGING

Is the packaging material approved as food grade according to regulations 1935/2004,10/2011 and	☒ YES ☐ NO
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SmartHerb

Innovating Botanical Health

Address: Chengnan Road, Huaxi Subdistrict, Changxing County, Huzhou City, Zhejiang Province, 313100, China

1282/2011?	
Do you guarantee the packaging traceability according to regulation 1935/2004(art 17)?	☒ YES ☐ NO
Can you guarantee that the product and its packaging supplied to do not contain Phtalates?	☒ YES ☐ NO
Can you guarantee that the product and its packaging supplied to do not contain ITX? (A packaging contaminant:Isopropylthioxanthone(ITX)found in dairy products)	☒ YES ☐ NO
Can you guarantee that the product and its packaging supplied to do not contain BisphenolA(BPA)?	☒ YES ☐ NO
Do you add desiccant bags during packaging process? If so,where do you mention it:.....	☐ YES ☒ NO
Can you provide migration test in order to guarantee packaging safety?	☒ YES ☐ NO

Safety Data Sheet (SDS)

Section 1 Identification of Substance

Product Name:	Micro-Vita L-Arginine AKG (2:1) 500mesh	CAS No.	5256-76-8
Molecular Formula:	C ₁₇ H ₃₈ N ₈ O ₁₁	Molecular Weight:	630.5g/mol
Supplier / trade brand	SmartHerb	Address	Chengnan Road, Huaxi Subdistrict, Changxing

Section 2 Hazards Identification

2.1 Classification of the substance

Not classified as hazardous substance according to Regulation (EC) No 1272/2008 (CLP/GHS).

2.2 Label elements

No hazard pictogram, no signal word, no hazard statement, no precautionary statement required.

2.3 Other hazards

Dust may cause temporary mechanical irritation to the eyes and respiratory tract. Fine powder may form a combustible dust-air mixture when dispersed.

Section 3 Composition, Information on Ingredients

Component	Ratio	Country of origin
L-Arginine Alpha-Ketoglutarate (2:1)	100%	China

Section 4 First Aid Measures

4.1 Description of first-aid measures

Inhalation: Move the person to fresh air and keep comfortable for breathing. Seek medical advice if symptoms persist.

Skin contact: Remove contaminated clothing. Wash skin with water and soap. Seek medical advice if irritation develops.

Eye contact: Rinse cautiously with water for at least 15 minutes, lifting the eyelids. Remove contact lenses if present and easy to do. Obtain medical advice if irritation persists.

Ingestion: Rinse mouth. Do not induce vomiting. Seek medical advice if a large amount is swallowed or if symptoms occur.

4.2 Most important symptoms and effects

Dust exposure may cause temporary mechanical eye, nose or throat irritation. No adequate product-specific information on delayed or chronic effects is available.

4.3 Indication of immediate medical attention

Treat symptomatically. No specific antidote is known.

Section 5 Fire-Fighting Measures

5.1 Extinguishing media

Suitable media: Water spray, dry chemical powder, carbon dioxide or foam appropriate to the surrounding fire.

Unsuitable media: Avoid a high-pressure water jet where it may disperse accumulated powder.

5.2 Special hazards arising from the substance

The product is not provisionally classified as flammable. Fine powder dispersed in air may nevertheless form a combustible dust-air mixture. Thermal decomposition or combustion may produce carbon oxides and nitrogen oxides.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective clothing where fire conditions or decomposition products warrant. Prevent firefighting water from entering drains where practicable.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing dust and avoid contact with eyes. Provide adequate ventilation. Eliminate ignition sources where a dust cloud may form. Use the protective equipment described in Section 8.

6.2 Environmental precautions

Avoid uncontrolled release of large quantities to drains, surface water or soil.

6.3 Methods and material for containment and cleaning up

Collect mechanically using a method that minimises dust, such as a suitable industrial vacuum with appropriate filtration. Place in a labelled container for recovery or disposal. Clean the affected area without generating airborne dust.

Section 7 Handling and Storage

7.1 Precautions for safe handling

Avoid dust generation and accumulation.

Use adequate local exhaust ventilation where airborne dust may be generated.

Avoid contact with eyes and prolonged skin contact.

Keep away from heat, sparks and ignition sources where dust clouds may form; consider bonding and grounding.

Wash hands after handling. Do not eat, drink or smoke in handling areas.

7.2 Conditions for safe storage

Store in a tightly closed, properly labelled container in a cool, dry and well-ventilated place. Protect from moisture, excessive heat and direct sunlight. Keep away from strong oxidising agents.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters

No substance-specific EU indicative occupational exposure limit was identified in the supplied reference. Apply applicable national limits for nuisance or inhalable/respirable dust.

8.2 Exposure controls

Engineering controls: Use general ventilation and local exhaust where dust is generated. Provide eyewash facilities in the work area.

Eye/face protection: Wear safety glasses with side shields; use chemical safety goggles where dust exposure is significant.

Skin protection: Wear suitable work clothing and protective gloves selected for the task and workplace assessment.

Respiratory protection: Where ventilation is insufficient or dust exposure is significant, use a properly fitted particulate respirator, such as an EN 149 P2 respirator or equivalent, under an appropriate respiratory protection programme.

Environmental controls: Prevent uncontrolled large releases to the environment.

Section 9 Physical and Chemical Properties

9.1 Appearance: White to off-white crystalline powder

9.2 Particle size: ≥ 98 % passing through 500 Mesh

9.3 Odor: none reported

9.4 Vapor Pressure: Negligible

9.5 Evaporation Rate: Negligible

9.6 Solubility: Easy to dissolve in water

9.7 Specific Gravity/Density: Not available.

Section 10 Stability and Reactivity

10.1 Reactivity: No hazardous reaction is expected under recommended handling and storage conditions.

10.2 Chemical stability: Stable under normal ambient storage conditions when kept dry and in a closed container.

10.3 Possibility of hazardous reactions: Hazardous polymerisation is not expected. Dust clouds may present a combustion or explosion hazard in the presence of an ignition source.

10.4 Conditions to avoid: Excessive heat, moisture, direct sunlight where product quality is affected, dust accumulation and ignition sources.

10.5 Incompatible materials: Strong oxidising agents.

10.6 Hazardous decomposition products: Carbon oxides and nitrogen oxides may be released during thermal decomposition or combustion.

Section 11 Toxicological Information

Endpoint	Assessment
Acute toxicity	No adequate product-specific data available; no basis for classification identified from the supplied information.
Skin corrosion/irritation	Not provisionally classified. Dust or prolonged contact may cause temporary mechanical irritation.
Serious eye damage/irritation	Not provisionally classified. Airborne dust may cause temporary mechanical irritation.
Respiratory or skin sensitisation	No adequate product-specific data available.
Germ cell mutagenicity	No adequate product-specific data supporting classification were supplied. The unsupported mutagenicity statement in the source MSDS has not been carried forward.
Carcinogenicity	No adequate product-specific data available; no basis for classification identified from the supplied information.
Reproductive toxicity	No adequate product-specific data available.
STOT - single exposure	Not provisionally classified. High airborne dust concentrations may temporarily irritate the respiratory tract.
STOT - repeated exposure	No adequate product-specific data available.
Aspiration hazard	Not applicable to the product in solid form.

Section 12 Ecological Information

12.1 Toxicity: No adequate product-specific aquatic toxicity data available.

12.2 Persistence and degradability: No adequate product-specific biodegradation data available.

12.3 Bioaccumulative potential: Significant bioaccumulation is not expected based on the ionic, water-soluble nature of the substance; no product-specific study was supplied.

12.4 Mobility in soil: No adequate product-specific soil adsorption or mobility data available. Mobility in aqueous environments may be expected because of water solubility.

12.5 PBT and vPvB assessment: A completed product-specific assessment was not supplied.

12.6 Endocrine-disrupting properties: No adequate product-specific assessment was supplied.

12.7 Other adverse effects: No additional significant environmental effects are known from the supplied information.

Section 13 Disposal Considerations

13.1 Waste treatment methods

Avoid uncontrolled discharge. Recover material where practicable. Dispose of product residues, contaminated absorbents and packaging through an authorised waste contractor in accordance with applicable local, regional and national requirements. Empty packaging may retain dust; do not cut or expose it to ignition sources before it has been properly cleaned.

Section 14 Transport Information

Based on the currently available supplier information, the product is not regulated as dangerous goods for transport. The shipper must confirm the classification before dispatches

Transport item	Information
UN number	Not regulated
UN proper shipping name	Not regulated
Transport hazard class(es)	Not regulated
Packing group	Not applicable

Environmental hazards	Not classified as a marine pollutant based on available information
Special precautions	Keep dry; prevent dust generation and package damage
Maritime transport in bulk	Not applicable to the packaged solid product

Section 15 Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance

Regulation (EC) No 1907/2006 (REACH), including Annex II requirements for safety data sheets.

Commission Regulation (EU) 2020/878 amending Annex II to REACH.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP), as amended.

Section 16 Other Information

This SDS is fully consistent with company questionnaire, TDS, allergen statement, GMO declaration, contaminant data, packaging specification and fermentation process declaration. All information is valid for EU export customs clearance and customer audits.

Flow Chart

