



## TECHNICAL DATA SHEET

### CALCIUM ALPHA-KETOGLUTARATE MONOHYDRATE

**Product Name:** Calcium Alpha-Ketoglutarate Monohydrate

**Abbreviation:** AKG-Ca Monohydrate

**Chemical Name:** Calcium 2-oxoglutarate monohydrate

**CAS No.:** To be confirmed according to the supplied grade and hydrate form

**Molecular Formula:** To be confirmed

**Molecular Weight:** To be confirmed

**Appearance:** White to off-white powder

**Grade:** Food / Nutritional Supplement Grade, subject to supplier confirmation

### 1. Product Description

Calcium Alpha-Ketoglutarate Monohydrate (AKG-Ca Monohydrate) is a calcium salt of alpha-ketoglutaric acid, an organic compound involved in cellular energy metabolism and the tricarboxylic acid (TCA) cycle.

It is developed for use in nutritional ingredient formulations and other applications where calcium alpha-ketoglutarate is an appropriate ingredient. Its suitability for specific applications depends on the applicable regulatory requirements, product specifications, and intended use.

### 2. Technical Specifications

| Parameter             |        | Specification             |
|-----------------------|--------|---------------------------|
| Appearance            |        | White to off-white powder |
| Identification        |        | Pass test                 |
| Content               | %      | 99                        |
| Calcium content       | ≥%     | 18.0-21.0                 |
| Loss on drying        | ≤%     | 1                         |
| Mercury               | ≤ppm   | 1.5                       |
| Cadmium               | ≤ppm   | 2.5                       |
| Lead                  | ≤ppm   | 2                         |
| Arsenic               | ≤ppm   | 3                         |
| Total Plate Count     | ≤cfu/g | 1000                      |
| Total Yeast & Mold    | ≤cfu/g | 100                       |
| Staphylococcus aureus |        | Negative                  |
| Salmonella            |        | Negative                  |
| Escherichia Coli      |        | Negative                  |

**Note:** The above is a preliminary specification framework, not a confirmed batch-release specification. Numerical limits should be established using validated analytical methods and actual manufacturing data.

### 3. Applications

- Nutritional supplement formulations, subject to regulatory approval and intended-use requirements.

- Research and development involving calcium alpha-ketoglutarate.
- Ingredient development for specialized nutritional products.
- Other suitable applications subject to technical evaluation.

#### **4. Packaging**

Standard packaging: 25kg cartons.

#### **5. Storage Conditions**

Store in a tightly sealed container in a cool, dry, and well-ventilated place. Protect from moisture, direct sunlight, and contamination.

#### **6. Handling and Safety**

Handle in accordance with good industrial hygiene practices. Avoid unnecessary dust generation and direct contact with the eyes. Use appropriate personal protective equipment as indicated by the product's Safety Data Sheet (SDS).

Refer to the applicable SDS for detailed safety, handling, and transportation information.

#### **7. Transportation**

Transportation classification and applicable shipping requirements should be determined according to the confirmed product identity and current SDS.

#### **8. Shelf Life**

To be confirmed by the manufacturer based on stability data and the specified packaging conditions.

#### **9. Quality Assurance**

Each batch should be released against the manufacturer's approved specifications and supported by a Certificate of Analysis (COA), where applicable.