

# PureKIC™

## Calcium Alpha-ketoisocaproate

- Toxicological test supported

### Product Description:

Alpha-ketoisocaproate (KIC) is a keto acid of the amino acid leucine. Branched-chain keto acids are very similar to branched-chain amino acids, the only difference being the presence of a keto group instead of an amino group. KIC is anticatabolic, which means it contributes to muscle growth by helping to move the body from a catabolic (muscle wasting) to anabolic (muscle building) state.



PureKIC™ provides the highest purity of KIC, which is proved by IR, NMR, and HPLC analysis, and the safety is supported by toxicological test.

**Molecular Formula:**  $C_{12}H_{22}CaO_8$

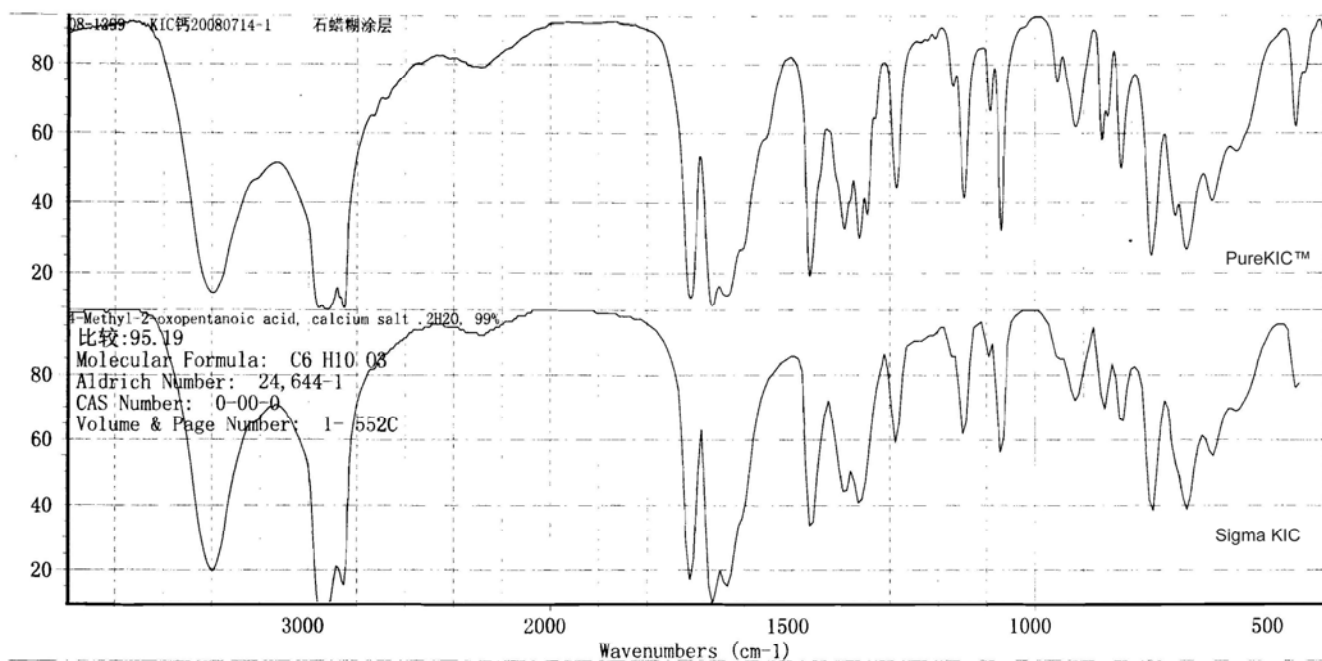
**Molecular Weight:** 334.38

### Quality Properties:

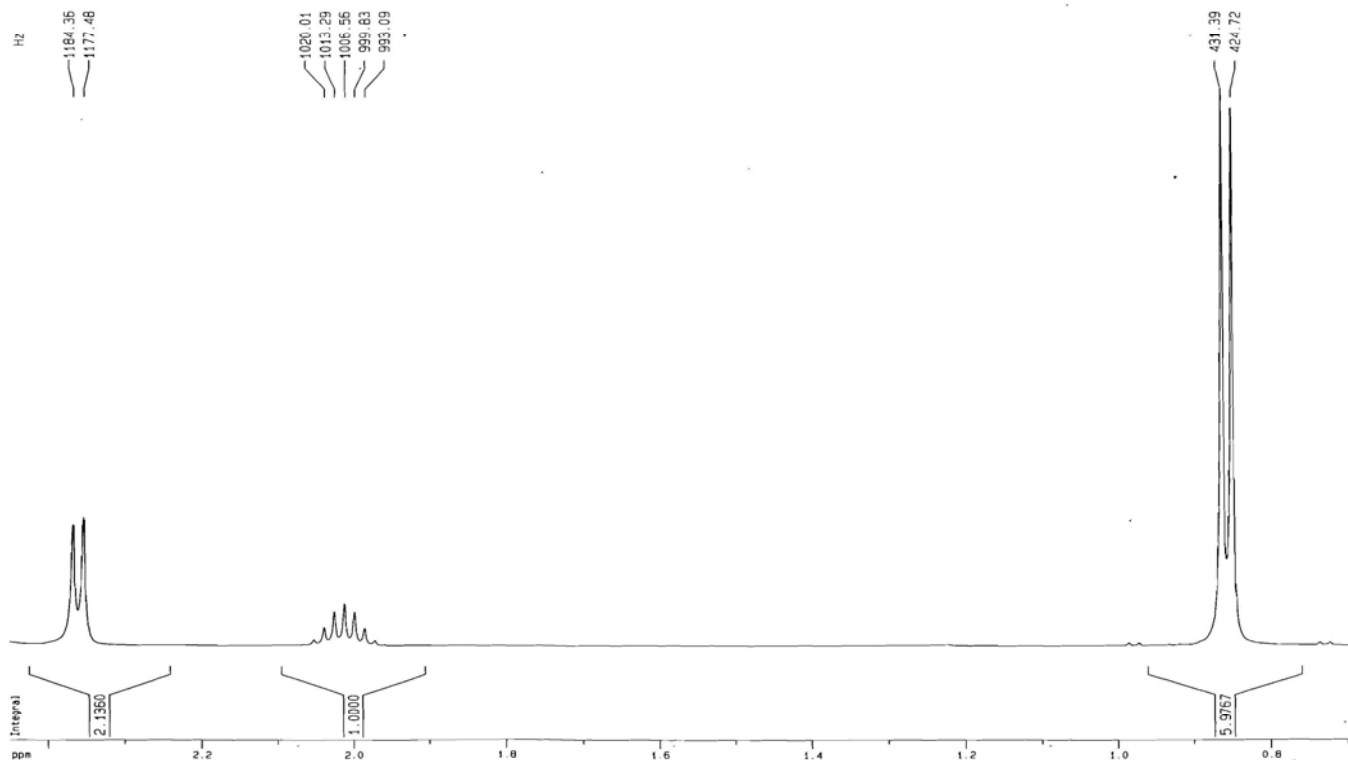
<b>Description</b>	White powder
<b>Odor</b>	Characteristic
<b>Identification</b>	IR conformed
<b>Assay</b>	NLT 99% (HPLC)
<b>Chloride</b>	NMT 200ppm
<b>Sulfate</b>	NMT 200ppm
<b>Heavy Metals</b>	NMT 10ppm
<b>Lead (Pb)</b>	NMT 1ppm
<b>Arsenic (As)</b>	NMT 1ppm

## Identification & Analysis:

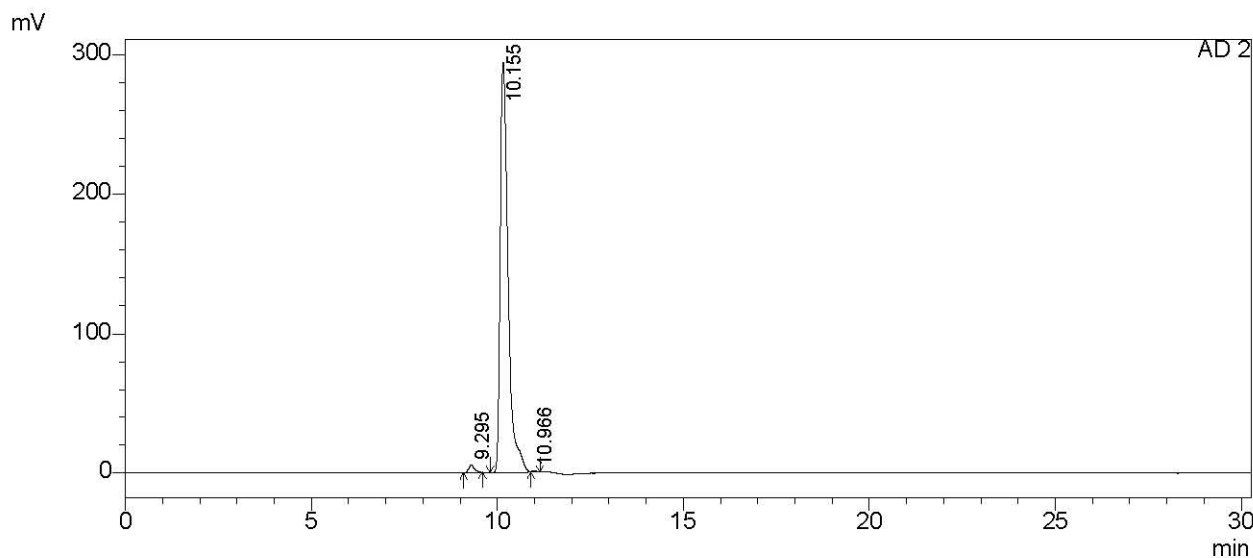
### 1) IR Spectrum



### 2) NMR Spectrum



### 3) HPLC Chromatogram



1 AD 2/

PeakTable

AD2 Ch1

Peak#	Ret. Time	Area	Height	Area %
1	9.295	31883	3997	0.720
2	10.155	4392545	294489	99.183
3	10.966	4303	828	0.097
Total		4428731	299314	100.000

#### Acute toxicity (Maximum Tolerated Dose, MTD)

Safety of PureKIC™ Calcium Alpha Ketoisocaproate was conducted according to the Pharmaceuticals Guidelines on MTD Test. 20,000mg/kg of PureKIC™ Calcium Alpha Ketoisocaproate was fed to fasting ICR male/female mice of 19~22g followed by close observation for 7 days. No fatal event and no abnormal changes were observed in the weight of mice (compared to control). Similarly, no abnormal changes were detected in organs of mice upon partial inspection conducted after the test. The MDT Level (oral) of PureKIC™ Calcium Alpha Ketoisocaproate on male/female mice is deduced to be > 20,000mg/kg.

#### Available Derivates:

- ✧ ARG-KIC (L-Arginine KIC Combo)
- ✧ LeuKIC (Leucine KIC Calcium)
- ✧ TauKIC (Taurine KIC Calcium)
- ✧ CreaKIC (Creatine Alpha Lipoic Acid KIC Calcium)
- ✧ GaKIC (Glycine Arginine KIC Calcium)