

INNOBIO offers a superior microencapsulated BCAA product, INNOBIO BCAA disperses rapidly and dissolves quickly with no foaming or sedimentation. Our BCAA is the clear choice for any ready to mix beverage powder, providing a clean, crystal clear, and pure finished product important to consumers, INNOBIO BCAA product options include a standard blend of L-leucine, L-isoleucine and L-valine in a 2:1:1 ratio. We also work with our customers to provide customized, tailor made amino acid ratios. Alternative amino acids options in any ratio are available as well according to customer requirements. We always accommodate vegan and non-allergenic BCAA options.

### 5 reasons to select INNOBIO BCAA

INNOBIO BCAA is manufactured using a patented process to produce a unique product excelling performance, safety and stability.

Our service is second to none. The INNOBIO technical sales staff and R&D scientists will work with you to solve your challenging formulation problems and to provide a high level of service to deliver a safe and pure ingredient on time that will enhance your finished product, all for a reasonable cost.





## Quality:

We meet or exceed all international product standards for product quality at an affordable and competitive price.

### Sales:

INNOBIO offers competitive pricing and efficient and rapid delivery to your location.

### Stability:

INNOBIO products are verified to be robust and shelf stable. We constantly monitor and validate our ingredient formulations and raw materials for stability, insuring that our customers are confident when they choose our material for their products.



Service:

Add: No.49, DDA, Dalian 116600, P. R. China Tel: +86 411 87589066/ 87406813; Fax: +86 411 87406801 Website: www.innobio.cn Email: info@innobio.cn



# **Instantized BCAA**

## **Product Comparison**

INNOBIO Instantized BCAA versus the competition

Sample		IBCAA(2:1:1) IBCAA(2:1:1)		IBCAA(2:1:1)	IBCAA(2:1:1)	
Company		Α	В	С	INNOBIO	
Appearance		White powder	Light yellow powder	White powder	White powder	
Odor		Typical	Smelly	Typical	Typical	
2% Solution turbidity (Smaller value, higher transparency)		43.28	20.55	55.55	16.30	
Dispersion in H <sub>2</sub> O	Infiltration rate	++	no dispersion	no dispersion	+++	
	Sedimentation rate	+++	·	_	++++	
Total content		<96%	<93%	96%	>98%	

### **INNOBIO Advantages**

#### Stable Raw Material Source

Fermented BCAA combined with a non-allergenic and non-GMO sunflower derived lecithin guarantee the safety of INNOBIO

## Patented Technology

INNOBIO patented microencapsulation technology delivers better stability, longer shelf life and perfect performance under low pH conditions.

### Product Purity

Total amino acid content of NLT

## Physical Characters

Rapid dispersion, fully dissolved with no foaming.

Product	Vegetarian	Kosher	Halal	Allergen Free	Non GMO	BSE/ TSE Free
Instantized BCAA Powder (2:1:1)		•	•	•	•	•
Instantized L-Leucine Powder	•	•	•	•	•	•
Vegan Instantized BCAA Powder (2:1:1	) •	•	•	•	•	•
Vegan Instantized L-Leucine Powder	•	•	•	•	•	•
Customized Instantized BCAA Powder		•	•	•	•	•
Instantized BCAA Powder (2:1:1) - BMA	•	•	•	•	•	•
Vegan Instantized BCAA Powder (2:1:1) - BN	MA •	•	•	•	•	•



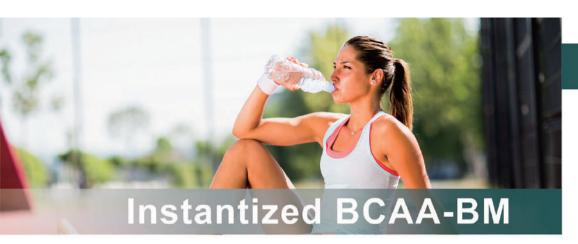






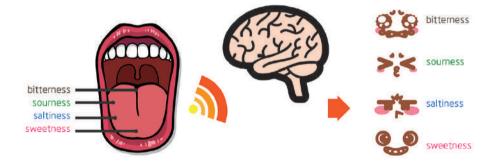




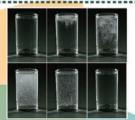


Branched chain amino acids (BCAAs) are extremely bitter and it is very difficult to mask this bitter flavor. Now, INNOBIO offers a solution to bitter BCAAs, Instantized BCAA-BM. Our microencapsulation process greatly reduces bitterness while providing excellent dispersion properties and eliminates foaming and sedimentation associated with other BCAA products. We guarantee that INNOBIO Instantized BCAA-BM will improve beverage flavor profile and improve overall customer satisfaction.

## How the taste process works



## Instantized BCAA-BM Advantages



#### ■ Decreased Bitterness

The bitterness is reduced 60-80% in contrast to regular BCAAs

#### ■ Physical Characteristics

Rapid dispersion, fully dissolved with no foaming.

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# **Instantized BCAA-BM**

## Bitterness analysis for Instantized BCAA-BM

■ A laboratory taste sensing system for evaluating drug and food flavors employs the same mechanism as that of the human tongue and converts taste data of various substances such as food and drugs into numerical data.

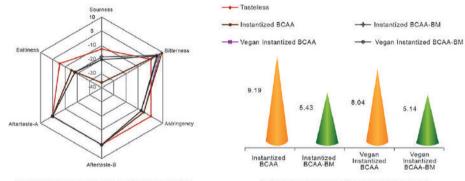


Fig1. Taste evaluation data using a taste sensing system Fig2. The bitterness data using a taste sensing system

#### ■ Sensory evaluation of BCAA by human subjects



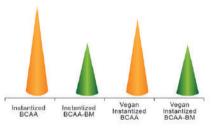


Fig 3. The bitterness evaluation of BCAA by human subjects

### **Product**

Product	Vegetarian	Kosher	Halal	Allergen Free	Non GMO	BSE/ TSE Free
Instantized BCAA Powder (2:1:1) – BM	•	•	•	•	•	•
Vegan Instantized BCAA Powder (2:1:1) – BM	•	•	•	•	•	•











