

### CERTIFICATE OF ANALYSIS

Name of sample: MONOSODIUM GLUTAMATE (F60BB)  
 Date of receiving: 2020/03/20  
 Testing duration: 2020/03/20  
 Batch No: P202003022VEV  
 Lot No: 200319  
 Manufacturing date: 2020/03/19  
 Expiry date: 2023/03/19  
 Order No: P202003022VEV  
 Manufacturer's FDA Facility Registration number: 15374876250  
 Quantity: 19.278mts

Item	Test method	Unit	Specification of product	Test results
Description	PD100069		Monosodium L-Glutamate is a white, odorless and slightly salty, free flowing crystal or crystalline powder. It complies with the specification of the Food Chemicals Codex (E621)	Passed test
Identification				
1) Qualitative test for sodium	JSFA IX		1) Occur typical reaction of sodium	1) Occur typical reaction of sodium
2) Qualitative test for glutamate	JSFA IX		2) Occur typical reaction of glutamate	2) Occur typical reaction of glutamate
Smell	PD100069	Level	0 ~ 1	0
Spots	PD100124	Spot	Max 20/200g	9
Assay (calculated on the dried basis)	JSFA IX (*)	% (w/w)	Not less than 99.0% as Monosodium Glutamate monohydrate	99.6
Clarity and color of solution	FCC 11		Passes Food Chemicals Codex Test	Passed test
Specific rotation ( $[\alpha]_D^{20}$ )	TCVN 1459:2008 (*)	Degree	Between +24.8 and +25.3	25.1
pH (2% aqueous solution)	TCVN 1459:2008 (*)		6.7 to 7.2	6.9
Loss on drying	TCVN 1459:2008 (*)	% (w/w)	Max 0.22	0.10
Chloride (Cl)	JSFA IX (*)	% (w/w)	Max 0.2	<0.20
Heavy metal (as Pb)	JSFA IX	µg/g	Max 10	< 1
Arsenic (as As <sub>2</sub> O <sub>3</sub> )	JSFA IX	µg/g	Max 1	< 0.5
Lead (Pb)	AOAC 999.10:2005 Modified/AAS (LOD = 0.10)	µg/g	Max 1	Not detected
Copper (Cu)	AOAC 999.10:2005 Modified/AAS (LOD = 0.50)	µg/g	Max 1	Not detected
Cadmium (Cd)	AOAC 999.10:2005 Modified/AAS (LOD = 0.025)	µg/g	Max 1	Not detected
Mercury (Hg)	AOAC 974.14:2005 Modified/AAS (LOD = 0.02)	µg/g	Max 0.05	Not detected
Pyrolidone carboxylic acid	TCVN 1459:2008 (LOD = 0.2)		Negative	Negative
Total aerobic plate count	FDA bacteriological manual-2001 (Chapter 3) (*)	CFU/g	Max 1000	<1000
Yeast and mold	FDA bacteriological manual-2001 (Chapter 18) (*)	CFU/g	Max 100	<100
Coliforms	AOAC 2016 (991.14) (*)	CFU/g	Max 10	<10 <sup>(a)</sup>
E.coli	AOAC 2016 (991.14) (*) (LOD = 10)	CFU/g	Negative	Negative
Salmonella/375g	TCVN 8342:2010		Negative	Negative
Enterobacteriaceae	ISO 21528-2:2017	CFU/g	Max 10	<10 <sup>(a)</sup>
Mesh	60 ↑	% (w/w)	≤ 20	4.7
	-140 ↓	% (w/w)	≤ 20	13.3
Assessment				PASS

Note :

- The test result was analyzed based on the sample code: 20172903
- Duration of sample storage: shelf life of product (3 years)
- (\*) the accredited method by VILAS
- This Certificate of analysis is supplied to the agent or the customer when request.
- (a): According to the test method, the result is expressed as less than 10 CFU/g when the dish contains no colony.
- LOD: limit of detection.

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