

**Test Report**

Date of issue: 26-03-2024

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Castco LRN: 240307-2680

Sample details as supplied by customer:-

Customer: UDA(Trading) LIMITED

Customer Ref. No.: --

Address: 北京市朝阳区酒仙桥电子城研发中心A2

Sample Name: UndoAge PURM NMN15000

Manufacturer: --

Sample / Batch No. : 24Y2002025

Sample Description: each bottle 30 capsules, each capsule 500mg

Date Sampled: --

Laboratory Test Results:-

Date of sample received: 07-03-2024

Test period: 07-03-2024 to 26-03-2024

Condition when received: Room temperature

Sample container: Bottle

- Conclusion(s):
1. Based on test result, toxic elements and metallic contaminants - arsenic, cadmium, mercury, lead, chromium, tin and antimony of submitted sample was found **below** the adult maximum tolerable intake of food inferred from recommendation of Centre of Food Safety of HK Food and Environmental Hygiene Department.
 2. The test results of the submitted sample complied with the Aerobic Plate Count, *Escherichia coli* & *Salmonella* Limits (**Satisfactory**) specified in the Microbiological Guidelines for Food (For Ready-to-eat Food in General and Specific Food Items) of HK Food and Environmental Hygiene Department.
 3. The tested organochlorine pesticides of the submitted sample were **below** detectable level.

Method used:

1-7: In-house method by employing inductively coupled plasma mass spectrometry

8: In-house method by employing gas chromatography with tandem mass spectrometry

9: US FDA, BAM Online, Ch. 3, 2001

10: AOAC, 991.14, 2005, Petrifilm Method

11: US FDA, BAM Online, Ch. 5, 2007

12: US FDA, BAM Online, Ch 18, Jan.2001

13: In-house method by employing high performance liquid chromatography with photodiode array detector

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Laboratory test result (cont'd):

Toxic elements and metallic contaminants

(Expressed with risk assessment approach)

Test items	Test result mg/kg(ppm)	Daily tolerable intake inferred from recommendation ^{4,5} of CFS of FEHD (calculated based on body weight of Asian adult population ⁶) mg (For reference only)	Maximum daily intake as calculated from sample maximum daily intake provided by customer (mg)	Conclusion (For reference only)	Sample size intake to reach the Daily tolerable intake inferred ⁷ (g) (For reference only)
1. Arsenic content	Not Detected	0.118	Below 0.000066	Below tolerable intake	Above 1180
2. Cadmium content	Not Detected	0.046	Below 0.00001	Below tolerable intake	Above 2300
3. Mercury content	Not Detected	0.013	Below 0.000015	Below tolerable intake	Above 433.3
4. Lead content	Not Detected	0.066	Below 0.00005	Below tolerable intake	Above 660
5. Chromium content	Not Detected	0.165	Below 0.0001	Below tolerable intake	Above 825
6. Tin content	Not Detected	110	Below 0.0005	Below tolerable intake	Above 110000
7. Antimony content	Not Detected	0.33	below 0.0001	Below tolerable intake	Above 1650

Normal intake as provided by customer: 1 times daily, 0.5 grams per time. Maximum intake 0.5 grams.

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Laboratory test result (cont'd) :

8. Organochlorine Pesticides Test

Test items	Test result mg/kg(ppm)
-Aldrin & Dieldrin	<0.01
-Chlordane (cis-, trans- & oxy-chlordane)	<0.02
-DDT (p,p'-DDT, o,p'-DDT, p,p'-DDE & p,p'-TDE)	<0.2
-Endrin	<0.01
-Heptachlor (heptachlor & heptachlor-epoxide[Isomer-B])	<0.015
-Hexachlorobenzene	<0.02
-Hexachlorocyclohexane (α -, β - & δ -BHC)	<0.06
-Lindane (γ -BHC)	<0.05
-Quintozene (quintozene, pentachloroaniline & methyl pentachlorophenyl sulphide)	<0.15

Microbial Testing

Test items	Test result CFU/g
9. Aerobic Plate Count	<10
10. <i>E. coli</i> count	<10
11. <i>Salmonella</i>	Not detected in 25g
12. Yeast and Mold count	<10

NMN Purity Testing

Test items	Test result Purity ⁸ (%)
13. beta-nicotinamide mononucleotide (NMN)	100

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Laboratory test result (cont'd):

- Test results only relate to the specimen tested and as received.
- ppm denotes part per million, ND denotes Not detected.
- The reporting limits of analytes are as follows respectively:
Arsenic = 0.1mg/kg; Mercury = 0.03mg/kg; Lead = 0.1mg/kg; Tin = 1mg/kg; Chromium = 0.2mg/kg;
Cadmium = 0.02mg/kg; Antimony = 0.2mg/kg
Aldrin, Dieldrin, trans-chlordane, cis-chlordane, Heptachlor = 0.005 mg/kg each
Oxychlordane, Endrin, H-epoxide = 0.01 mg/kg each
Hexachlorobenzene (HCB), alpha-hexachlorohexane(α -HCH), beta-hexachlorohexane(β -HCH),
delta-hexachlorohexane(δ -HCH) = 0.02 mg/kg each
p,p'-DDE, o,p'-DDT, p,p'-DDD, p,p'-DDT, Lindane, pentachloronitrobenzene (PCNB),
pentachloroaniline (PCA), methyl pentachlorophenylsulphide (PCAS) are 0.05mg/kg each.
- CFS of FEHD of HKG had suggested recommendations concerning toxic elements and metallic contaminants in past years:
Arsenic: <<Food Safety Focus (17th Issue, December 2007) – Arsenic and Food Safety>>
Cadmium: <<Food Contaminants - Cadmium in Food>>
Mercury: <<Report on the First Hong Kong Total Diet Study: Metallic Contaminants>> posted on CFS website
Lead: <<Report on the First Hong Kong Total Diet Study: Metallic Contaminants>> posted on CFS website
Chromium: <<Food Safety Focus (63rd Issue, October 2011) – Incident in Focus - Vegetables and Chromium Contamination>>
Tin: <<Report on the First Hong Kong Total Diet Study: Metallic Contaminants>> posted on CFS website
Antimony: <<Report on the First Hong Kong Total Diet Study: Metallic Contaminants>> posted on CFS website
- CFS recommended following daily tolerable intake of metallic contaminants:
Arsenic as inorganic arsenic, Mercury as methyl mercury and Chromium as hexavalent chromium (since toxicity of hexavalent chromium is greater than other state of chromium).
- World Health Organization assumed average body weight of Asian adult population to be 55 kilograms.
- To calculate sample size need to reach heavy metal maximum daily intake of Arsenic, mercury and chromium, Assumptions were made:
All arsenic in sample is inorganic arsenic, all mercury in sample is methyl mercury and all chromium in sample is hexavalent chromium.
- The purity (%) of NMN content is presented as NMN content (mg) per claimed NMN content in sample (mg).
As provided by client, claimed NMN content in sample is 500mg.
Result is rounded to nearest integer.

Checked by :


Wong Chi Ho
Technical Manager


Tsing Chan Man
Assistant Technical Manager (Acting)

Certified by :


Lo Yim Lun
Senior Manager

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For Reference only

Microbiological Guidelines for Food (For ready-to-eat food in general and specific food items) Aug 2014 (revised) Centre for Food Safety			
Food Category	Microbiological quality Result (colony-forming unit (cfu)/g)		
	Satisfactory	Borderline	Unsatisfactory
Table 1.2 Guidance on the interpretation of results for ACC levels [30°C / 48 hours] in various ready-to-eat foods			
Category 8	<10 ⁶	10 ⁶ - <10 ⁸	≥10 ⁸
Vacuum product			
Table 1.3 Guidance on the interpretation of results for hygiene indicator organisms in ready-to-eat food in general			
<i>Escherichia coli</i>	<20	20 - <10 ²	>10 ²
Table 2.1 Guidance on the interpretation of results for specific food borne pathogens in ready-to-eat food in general			
<i>Salmonella</i>	n.d. in 25g	N/A	Detected in 25g

End of Report