

Liquid organic fertilizer analysis report

1. Analyze project and the method

(1) Nutrients: according to food testing guidelines

Low-level fatty acids: Gas chromatography (FPD)

Phenolic: Gas chromatography mass spectrometry (SCAN, SIM)

(2) Three factors, medium weight elements: fertilizer analysis

Must trace elements: plasma transmitted mass spectrometry

(3) Heavy metals such as: Metal content detection methods in industrial waste

Pesticide residue: Gas chromatography mass spectrometry, liquid chromatography mass spectrometry

Odorous substances: Specific stench physical measurement

(4) Amino acids: New food analysis (liquid chromatography)

2. Analysis results

(1) Fertilizer nutrients

Liquid fertilizer containing lower fatty acids of the acetic acid17, 400mg/L and prop ionic acid 140mg/L, phenyl hydroxide undetected。As nutrition ingredient, see through table, liquid fertilizer100g contains 87.6g Moisture, Protein2.2g, Lipid1.9g, Ash1.2g, carbohydrate7.4g, energy 55kcal, table salt0.31g。As a useful indicator of the proliferation of soil carbon / nitrogen ratio of up to 15.8, nutrient and esstional elements exit。

Table 1 Fertilizer nutrients in liquid fertilizer

Fertilizer type Fertilizer ingredient	Liquid fertilizer	Compost sludge fertilizer	Dry chicken manure compost	Fermentation cow milk
Moisture (%)	87.6	54.5	1.6	42.2
PH[—]	3.3	6.9	***	***
Nitrogen (N%)	0.33	4.5	4.2	1.8
Phosphorus (P2O5%)	0.17	10.3	7.4	3.0
Potassium (K2O%)	0.09	0.4	3.8	3.2
Carbon (C%)	5.2	34.9	30.6	19.8

Carbon/Nitrogen	15.8	7.7	7.8	11.0
Calcium (CaO%)	0.4	4.8	14.9	***
Magnesium (MgO%)	0.02	2.4	1.8	***
The trace elements in soil	All contain	***	***	***

(2) Security

a. Heavy metal: see table2,all sorts of heavy metals and harmful substance content in liquid fertilizer is far below specified.

Table2 Heavy metal contains in liquid fertilizer

Heavy metal contains in liquid fertilizer (mg/kg)		Fertilizer banning law benchmark (Sludge fermentation fertilizer for columns) (mg/kg)
Mercury	0.0026	2
Arsenic	0.09	50
Cadmium	0.02	5
Copper	0.39	***
Aluminum	3.5	***
Cobalt	0.03	100
Nickel	0.13	300
Chromium	0.13	500

b. Pesticide residue: To terminate the use of BHC ect OCPs, dilation, methylnitrophos ect pesticide, oxine-copper, Kapteyn ect pesticide and simazine ect pesticide, total 146 substances inspection result did not detect any content (below limit 0.01 PPM).

c. Repugnant substance: Aiming at 100 square meters of farmland sprinkled with 1 tons liquid fertilizer, The testing result for stench substances (22 substances) such as ammonia, hydrogen sulfide metrication, methyl bisulfide, which is far below the prevention odorous specified value.

d. Pathogen city fungus (coli form)

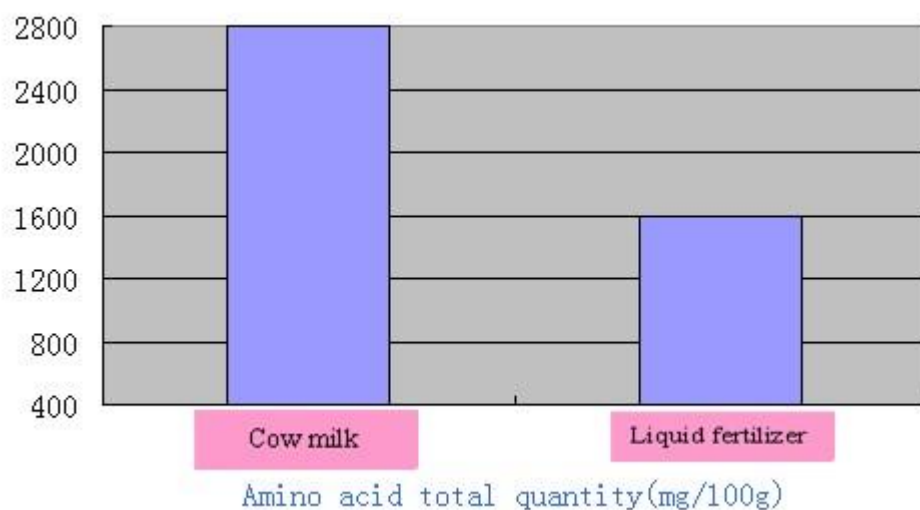
Because the ph value is3.3, do not detect the coli form in liquid fertilizer.

3. Characteristics of liquid fertilizer (Amino acids)

According to the different factory produced liquid fertilizer sampling analysis results, in table 3 shows the total quantity of the amino acids equivalent to half the milk.

Table3 Amino acids in liquid fertilizer

Analysis project (Amino acids)	Analysis results (mg/100g)		Amino acids quantity in milk
	A Factory	factory	
1 Lysine	120	110	240
2Threonine	88	76	120
3 Leucine	160	150	280
4Isoleucine	86	74	150
5Valine	98	85	190
6Phenylalanine	73	66	140
7Methionine	29	35	75
8L-aspartic acid	150	120	230
9Serine	110	87	140
10Glutamic acid	320	270	560
11Glycine	100	110	54
12Alanine	180	150	93
13Histidine	43	37	80
14Arginine	120	150	93
15Tyrosine	82	51	110
16Proline	110	110	280
17Cystine	Undetected	Undetected	26
18Tryptophan	15	13	13



Amino acids total quantities are synthesis for 18 kinds of amino acids

4. Conclusion

Through all kinds of tests, we concluded that liquid fertilizer plays a very good effect on plant safety and nutrition. its characteristic are more balanced in three elements, medium weight elements, must trace elements and amino acid etc, and amelioration of soil elements carbon/nitrogen is also high. Liquid fertilizers play a good effect on improving crops disease tolerance and reduce crops pesticide and improve the crops flavors.