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## China, Peoples Republic of

### FAIRS Product Specific

### Feed Quality Testing Standards

### 2006

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**Report Highlights:** This report is an UNOFFICIAL translation of the People's Republic of China's standard on "Allowable Error in Judging Quality Testing Results in Feeds" (GB/T 18832-2002). The standard took effect March 01, 2003. This information is important for companies that are registering new animal feed products, products subject to testing upon entry into China, or feeds randomly sampled in the Chinese market. There is no trade impact resulting from this regulation.

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Includes PSD Changes: No  
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Beijing [CH1]  
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## Executive Summary

This report is an UNOFFICIAL translation of the People's Republic of China's standard on "Allowable Error in Judging Quality Testing Results in Feeds" (GB/T 18832 2002). The standard took effect on March 01, 2003. It stipulates the allowable testing error while monitoring 45 compounds found in feeds. This applies to the testing results from the quality inspection and supervision of the nutrition and hygienic index in compound feeds, concentrated feeds, feed additives, feed premixes, and individual feed ingredients. This information is important for companies that are registering new animal feed products, products subject to testing upon entry into China, or feeds randomly sampled in the Chinese market. There have not been reports about its impact on trade.

## BEGIN TRANSLATION

### National Standard of the People's Republic of China GB/T 18823-2002

#### Allowable Error for Judge of Quality Testing Results in Feeds

Issued on September 06, 2002. Implemented on March 01, 2003

Issued by General Administration of Quality Supervision, Inspection and Quarantine of the Peoples' Republic of China

#### Foreword

This standard is hereby established based on the summary of requirements of parallel double-sample relative deviation in the quality testing of feeds in China in the recent twenty years, referencing to the regulations on the allowable error for evaluating quality testing results in feeds in countries with developed feeds industry (Germany, United States, former USSR), with the consideration of the current China's analysis techniques, instruments and equipment, as well as the actual level of analysts.

The standard is basically similar to the relevant standard in other countries in terms of technical content. Some testing items are added or subtracted in accordance with the situation of China. In particular the allowable error for judge of testing results for hygienic index in feeds is added.

Upon the issuance and implementation of this standard, Annex A of GB/T 5915-1993 and Annex A of GB/T 5916-1993 and relevant regulations in some industry standard is annulled.

This standard is proposed by the Ministry of Agriculture of People's Republic of China.

This standard is registered by the National Feed Industry Standardization Technical Committee.

This standard is drafted by: Huazhong Agriculture University

Major drafters of this standard: Yu Yanhu, Chen Xibin, Qi Desheng, Huang Bingtang

## Introduction

The allowable error prescribed in this standard is provided to feed quality supervision and testing authorities and feed production facilities for their judgment of the quality testing results of feeds. There is always some error in testing results of any product. The product shall be judged as not up to the standard only when the testing results exceed (lower or higher than) the range of the allowable error as prescribed in the standard.

The allowable error prescribed in the standard is different from the accuracy (the repeatability mainly) requirement of the test method. China's current standard for various test methods for feeds already set out requirements on the repeatability. This standard is established by taking comprehensive factors into consideration, and is calculated and determined based on the double value of allowable error for judge of testing results in feeds in the currently effective paralleled double-sample relative deviation feed testing method.

## Allowable error for judging of quality testing results in feeds

### 1. Scope

The standard prescribes the allowable error for judging of testing results in quality testing in feeds.

The standard applies to the judge of testing results in the quality inspection and supervision of nutrition and hygienic index in compound feeds, concentrated feeds, feed additives, premix feeds, and individual feed ingredients.

### 2. Requirement

The allowable error for judge of quality testing results in feeds is prescribed in Table 1 and Table 2 and Table 3.

Table 1. Allowable error for judge of normal nutrition index testing results in feeds

Test items	Nutrition index / (%)	Allowable error (Absolute error) /%	Test items	Nutrition index / (%)	Allowable error (Absolute error) /%
Moisture	5	+0.2	Crude fat	>4~6	- 0.5
	5~ 10	+0.3		>6~9	- 0.6
	> 10~ 15	+0.4		>9~ 12	- 0.7
	> 15~ 20	+0.5		>12~ 15	- 0.8
	> 20~ 30	+0.6		> 15	- 1.0
	> 30~ 40	+0.8	Crude fiber	<3	+0.4
	> 40	+1.0		3~ 5	+0.6
Crude protein	<5	- 0.3		>5~ 7	+0.8
	5~ 10	- 0.4		>7~ 9	+1.0
	> 10~ 15	- 0.6		>9~ 12	+1.2
	> 15~ 20	- 0.8		>12~ 15	+1.4
	> 20~ 25	- 1.0		> 15	+1.6
	> 25~ 30	- 1.1	Crude ash content	<5	+0.1
	> 30~ 40	- 1.2		5~ 7	+0.2
	> 40~ 50	- 1.3		>7~ 9	+0.3
	> 50~ 60	- 1.4		>9~ 11	+0.4
> 60~ 70	- 1.5	>11~ 13		+0.5	
> 70	- 1.6	>13~ 16		+0.6	
Crude fat	<2	- 0.2		>16~ 20	+0.7
	2~ 3	- 0.3		> 20	+0.8
	> 3~ 4	- 0.4		Calcium magnesium	<0.5

Table 1 (Continued)

Test items	Nutrition index / (%)	Allowable error (Absolute error) /%	Test items	Nutrition index / (%)	Allowable error (Absolute error) /%
Ca Me	0.5~ 1	±0.15	Common salt	> 1~ 2	±0.2
	> 1~ 2	±0.2		> 2~ 3	±0.3
	> 2~ 3	±0.3		> 3~ 4	±0.4
	> 3~ 4	±0.4		> 4~ 5	±0.5
	> 4~ 5	±0.6		> 5	±0.6
	> 5~ 10	±0.9	Lysine Methionine	< 0.5	- 0.1
	> 10~ 15	±1.2		> 0.5~ 1	- 0.15
> 15	±1.5	> 1~ 2		- 0.25	
Total phosphorus	< 0.5	- 0.1		> 2~ 3	- 0.4
	> 0.5~ 1	- 0.15		> 3~ 4	- 0.55
	> 1~ 2	- 0.2		> 4~ 5	- 0.7
	> 2~ 3	- 0.3	> 5~ 8	- 0.9	
	> 3~ 4	- 0.4	> 8	- 1.2	
	> 4~ 5	- 0.6	Tryptophan	< 0.2	- 0.04
	> 5~ 10	- 0.9		0.2~ 0.5	- 0.08
> 10~ 15	- 1.2	> 0.5~ 1		- 0.12	
> 15	- 1.5	> 1~ 2		- 0.2	
Common salt	> 0.3	±0.05	> 2~ 3	- 0.3	
	> 0.3~ 1	±0.1	> 3	- 0.4	

Note 1: "+" stands for the nutrition index plus the allowable error (upper limit), i.e., qualify when it is less or equal to this value.

Note 2: "-" stands for the nutrition index minus the allowable error (lower limit), i.e., qualify when it is less or equal to this value.

Note 3: "±" stands for the nutrition index plus/minus the allowable error, forming the upper/lower limit.

Note 4: The upper limit or lower limit of the judge of testing result of some individual product testing items shall be determined in accordance with the actual situation, and the allowable error shall be used according to the calculation methods of upper limit or lower limit, without considering the limitation of the "+", "-" in that testing item.

Table 2 Allowable error for judge of hygienical index in feeds

Test items	Nutrition index / (%)	Allowable error (Absolute error) /%	Test items	Nutrition index / (%)	Allowable error (Absolute error) /%
As (calculated by the total amount)	< 2	+ 0.3	Cr (calculated by Cr)	> 40~ 60	+ 12
	2~ 3	+ 0.4		> 60~ 80	+ 16
	> 3~ 5	+ 0.6		> 80~ 120	+ 22
	> 5~ 8	+ 0.8		> 120~ 200	+ 28
	> 8~ 11	+ 1.0		> 200	+ 32
	> 11~ 15	+ 1.2	Hg (calculated by Hg)	< 0.1	+ 0.04
	> 15~ 20	+ 1.4		> 0.1~ 0.2	+ 0.05
	> 20~ 30	+ 1.7		> 0.2~ 0.4	+ 0.08
	> 30~ 40	+ 2.0		> 0.4~ 0.6	+ 0.10
	> 40	+ 2.2		> 0.6	+ 0.12
Pb (calculated by Pb)	< 5	+ 1.0	Cd (calculated by Cd)	< 0.3	+ 0.1
	5~ 8	+ 1.2		> 0.3~ 0.5	+ 0.2
	> 8~ 12	+ 1.5		> 0.5~ 1	+ 0.3
	> 12~ 15	+ 1.8		> 1~ 2	+ 0.4
	> 15~ 20	+ 2.0		> 2~ 3	+ 0.5
	> 20~ 30	+ 2.2		> 3	+ 0.6
	> 30~ 40	+ 2.4	HCN (calculated by HCN)	< 50	+ 8
	> 40~ 60	+ 2.8		> 50~ 100	+ 10
	> 60~ 80	+ 3.2		> 100~ 200	+ 20
	> 80	+ 3.5		> 200~ 300	+ 30
F (calculated by F)	< 50	+ 10	> 300	+ 35	
	50~ 100	+ 20	NaNO <sub>2</sub> (calculated by NaNO <sub>2</sub> )	< 2	+ 0.5
	> 100~ 200	+ 30		2~ 5	+ 1.0
	> 200~ 300	+ 35		> 5~ 10	+ 2.0
	> 300~ 400	+ 40		> 10~ 15	+ 3.0
	> 400~ 500	+ 50		> 15~ 30	+ 5.0
	> 500~ 800	+ 80		> 30~ 60	+ 7.0
	> 800~ 1200	+ 100		> 60~ 90	+ 9.0
	> 1200~ 1700	+ 140		> 90	+ 10.0
	> 1700~ 2400	+ 190		Dissociated Gossypol	< 50
> 2400	+ 240	50~ 100	+ 15		
Cr (calculated by Cr)	< 10	+ 2	> 100~ 200		+ 25
	10~ 20	+ 4	> 200~ 300		+ 40
	> 20~ 40	+ 8	> 300~ 400	+ 60	

Table 2 (Continued)

Test items	Nutrition index / (%)	Allowable error (Absolute error) /%	Test items	Nutrition index / (%)	Allowable error (Absolute error) /%
Dissociated Gossypol	> 400~ 600	+ 80	Oxazolidinethione	> 5000~ 6000	+ 500
	> 600~ 900	+ 100		> 6000	+ 580
	> 900~ 1200	+ 110	HCH	< 0.05	+0.02
	> 1200	+ 120		0.05~ 0.1	+0.03
< 100	+ 20	> 0.1~ 0.3		+0.05	
Propylene isosulfocyanic ester (calculated by Propylene isosulfocyanic ester)	100~ 300	+ 40		> 0.3~ 0.5	+0.08
> 300~ 500	+ 80	> 0.5~ 1.0		+0.15	
> 500~ 1000	+ 120	> 1.0~ 1.5		+0.23	
> 1000~ 2000	+ 160	> 1.5~ 2.0		+0.30	
> 2000~ 3000	+ 240	> 2.0		+0.35	
> 3000~ 4000	+ 320	DDT	< 0.05	+0.01	
> 4000	+ 400		> 0.05~ 0.1	+0.02	
Oxazolidinethione	< 500		+ 80	> 0.1~ 0.2	+0.04
	500~ 1000		+ 120	> 0.2~ 0.5	+0.08
	> 1000~ 2000		+ 180	> 0.5~ 0.8	+0.12
	> 2000~ 3000		+ 260	> 0.8~ 1.2	+0.16
	> 3000~ 4000		+ 340	> 1.2	+0.20
	> 4000~ 5000	+ 420			

Note: "+" stands for the hygienical index plus the allowable error (upper limit), i.e., qualify when it is less or equal to this value.

**Table 3 Allowable error for judge of testing results of vitamin and microelement contents in feeds**

Test items	Nutrition index / (%)	Allowable error (Absolute error) /%	Test items	Nutrition index / (%)	Allowable error (Absolute error) /%
Vitamin A <sup>a</sup>	< 5000	- 50	Vitamin E <sup>a</sup>	> 50~ 500	- 40
	5000~ 10000	- 40		> 500~ 5 000	- 30
	> 10 000~ 100 000	- 30		> 5 000~ 10 000	- 20
	> 100 000~ 500 000	- 20		> 10 000	- 10
	> 500000~ 1000 000	- 15	Vitamin K	< 5	- 50
	> 1 000 000	- 10		5~ 50	- 40
Vitamin D <sub>3</sub> <sup>a</sup>	< 1 000	- 50		> 50~ 500	- 30
	1000~ 10 000	- 40	> 500~ 1000	- 20	
	> 10 000~ 100 000	- 30	> 1 000	- 10	
	> 100 000~ 800 000	- 20	Vitamin B <sub>1</sub>	< 5	- 40
	> 800 000	- 15		5~ 50	- 30
Vitamin E <sup>a</sup>	< 50	- 50		> 50~ 100	- 20

Table 3 (Continued)

Test items	Nutrition index / (%)	Allowable error (Absolute error) /%	Test items	Nutrition index / (%)	Allowable error (Absolute error) /%
Vitamin B <sub>1</sub>	> 500~ 2 000	- 15	Biotin	> 20~ 200	- 30
	> 2 000	- 10		> 200~ 500	- 20
Vitamin B <sub>2</sub>	< 10	- 40		> 500	- 15
	10~ 100	- 30	Choline chloride	< 1 000	- 40
	> 100~ 1 000	- 20		1 000~ 10 000	- 30
	> 1 000~ 4 000	- 15		> 10 000~ 40 000	- 20
> 4 000	- 10	> 40 000~ 80 000		- 15	
Vitamin B <sub>6</sub>	< 10	- 40	> 80 000	- 10	
	10~ 100	- 30	Vitamin C	< 500	- 40
	> 100~ 1 000	- 20		500~ 5 000	- 30
	> 1 000~ 2 000	- 15		> 5 000~ 10 000	- 20
> 2 000	- 10	> 10 000~ 50 000		- 15	
Vitamin B <sub>12</sub>	< 0.5	- 50	> 50 000	- 10	
	0.5~ 2	- 40	Iron (Fe)	< 100	- 35
	> 2~ 5	- 30		100~ 500	- 30
	> 5~ 8	- 20		> 500~ 2 000	- 25
	> 8	- 15		> 2 000~ 8 000	- 20
< 50	- 40	> 8 000~ 15 000		- 15	
Nicotinic acid	> 50~ 500	- 30	> 15 000	- 10	
	> 500~ 5000	- 20	Copper (Cu)	< 50	±35
	> 5000~ 15000	- 15		50~ 400	±30
	> 15000	- 10		> 400~ 2 000	±25
< 40	- 40	> 2 000~ 8 000		±20	
Pantothenic acid	40~ 400	- 30	> 8 000~ 20 000	±15	
	> 400~ 4 000	- 20	> 20 000	±10	
	> 4000~ 8000	- 15	Zinc (Zn)	< 100	±40
	> 8000	- 10		100~ 500	±35
< 5	- 40	> 500~ 2 000		±30	
5~ 50	- 30	> 2 000~ 8 000		±25	
> 50~ 500	- 20	> 8 000~ 15 000		±20	
Folic acid	> 500~ 1000	- 15	> 15 000~ 25 000	±15	
	> 1000	- 10	> 25 000	±10	
	< 2	- 50	Manganses (Mn)	< 100	- 35
2~ 20	- 40	100~ 500		- 30	

Table 3 (Continued)

Test items	Nutrition index / (%)	Allowable error (Absolute error) /%	Test items	Nutrition index / (%)	Allowable error (Absolute error) /%
Manganeses (Mn)	> 500~1 500	- 25	Selenium (Se)	0.5~5	±40
	> 1 500~5 000	- 20		> 5~10	±35
	> 5 000~10 000	- 15		> 10~30	±30
	> 10 000	- 10		> 30~50	±20
Iodine (I)	< 2	- 45	Cobalt (Co)	> 50	±15
	2~20	- 40		< 2	- 45
	> 20~50	- 35		2~20	- 40
	> 50~100	- 30		> 20~50	- 35
	> 100~200	- 20		> 50~100	- 30
> 200	- 15	> 100~200		- 20	
Selenium (Se)	< 0.5	±50	> 200	- 15	
<p>Note 1: "-" stands for the nutrition index minus the allowable error (lower limit), i.e., qualify when it is bigger than or equal to this value.</p> <p>Note 2: "±" stands for the nutrition index plus/minus the allowable error, forming the upper/lower limit.</p> <p>The unit for its nutrition index is IU/kg; the unit for other nutrition index is mg/kg.</p>					

END TRANSLATION