

GB

National Food Safety Standard

GB 11674—2010

National food safety standard
Whey powder and whey protein powder

Issued 26-03-2010

Implement 01-12-2010

Issued by

Ministry of Health of the People's Republic of China

Foreword

This standard is based on Codex Stan 289-1995(Rev.1-2003, Amd.2006 codex standard for Whey powders), but it is not equal to Codex stan 289-1995(Rev.1-2003, Amd. 2006) in conformity.

This standard replaces GB 11674-2005 Hygiene Standard of whey powder.

Compared to GB 11674-2005, the following items are revised in this standard:

- The name of this standard has been changed from “Hygiene standard of whey powder” to “Whey powder and whey protein powder”;
- The scope has been modified;
- In ‘terms and definitions’, the definition of whey and whey protein powder has been added;
- In “Physical and chemical requirements”, the product category has been modified to demineralized whey powder and non-demineralized whey powder and whey protein powder;
- The requirement of lactose is added;
- ‘Fat content’ is deleted;
- ‘acidity (count as lactic acid)’ is deleted;
- ‘Fe’ is deleted;
- ‘contaminants’ should comply with GB2762 the maximum limits for contaminants in foods
- ‘Mycotoxins’ should meet the requirement in GB 2761
- ‘veterinary drugs residual’ is deleted;
- The expression of Microbiological Index is Modified;
- The requirements of nutritional fortification substances are added.

This standard will replace the following editions released in the past:

- GB 16774-1989, GB11674-2005

National food safety standard

Whey powder and whey protein powder

1 Scope

This standard applies to demineralized whey powder and non-demineralized whey powder and whey protein concentrate and whey protein isolate, etc.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated reference documents, the latest version applies to this standard.

3 Terms and definitions

3.1 Whey

Whey is a fluid separated from the curd after coagulation of milk during the cheese making and casein preparation by rennet, acidified or membrane filtration.

3.2 Whey powders

Whey powders are powdered products by evaporating and drying the whey.

3.2.1 Demineralized whey powder

Demineralized whey powders are powdered products made from liquid whey by the process of demineralization and drying.

3.2.2 Non-demineralized whey powder

Non-demineralized whey powders are powder products made from liquid whey by directly drying and without the process of demineralization.

3.3 Whey protein powders

Whey protein powders are powder products made of the whey, through the process of ultra-filtration and concentration and dehydration, with protein content not less than 25%.

4 Specification

4.1 Requirement of raw material

4.1.1 Whey: whey obtained from the raw milk which meets the requirements of GB 19301.

4.1.2 Other materials: should comply with the corresponding hygiene standard and related regulations.

4.2 Sensory requirements: Should meet the requirement in table 1.

Table 1 Sensory Requirements

Item	Requirements	Test methods
Color	Color with good uniformity	Take sample with proper amount in 50 ml beaker, observe its color and texture under natural light. Smell and then taste after rinse mouth
Taste and flavor	Proper taste and flavor of this kind of product, no off-flavor	
Texture	Powdered products with good uniformity, without clotting, without visible foreign	

	bodies.	with warm water.
--	---------	------------------

4.3 Physical and chemical requirements

The physical and chemical requirements should meet the requirement in table 2.

Table 2 Physical and chemical requirements

Item	Requirements			Test method
	Demineralized whey powder	Non-demineralized whey powder	Whey protein powder	
Protein/(g/100g) \geq	10.0	7.0	25.0	GB5009.5
Ash /(g/100g) \leq	3.0	15.0	9.0	GB5009.4
Lactose /(g/100) \geq	61.0		—	GB5413.5
Moisture(g/100g) \leq	5.0		6.0	GB5009.3

4.4 Contaminates Limits

The Contaminates Limits should meet the requirement in GB2762.

4.5 Maximum limits for Mycotoxins

Should meet the requirement in GB2761.

4.6 Microbiological Index

The Microbiological level should meet the requirement in table 3.

Table 3 Microbiological requirements

Item	Sampling plan and requirements (if not specified, express as CFU/g)				Test method
	n	c	m	M	
<i>Staphylococcus aureus</i>	5	2	10	100	GB4789.10 Method 2 Standard plate count method
Salmonella	5	0	0/25g	-	GB4789.4
Sample analysis and preparation should comply with GB4789.1 and GB 4789.18.					

4.7 Food additives and nutritional fortification substances

4.7.1 The uses of food additives and nutritional fortification substances should comply with corresponding standard and related regulations.

4.7.2 Each kind of food additives or nutritional fortification substances used and its usage should meet the requirement of GB2760 and GB 14880.