

Voluntary Report – Voluntary - Public Distribution

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Report Name: New Food Materials and Additives including GMM Derived Enzymes Approved

Country: China - People's Republic of

Post: Beijing

Report Category: Biotechnology and Other New Production Technologies, Sanitary/Phytosanitary/Food Safety, FAIRS Subject Report, MISC-Commodity

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Report Highlights:

On May 11, 2022 the National Health Commission (NHC) approved 36 new food materials and additives, including seven enzymes derived from Genetically Modified Microorganisms (GMMs). These approvals follow an earlier announcement issued on March 1 of 32 food materials and additives, including 4 GMM derived enzymes, approved for use in China. This report provides a summary of the newly approved food materials and additives from both announcements.

Summary:

On May 11, 2022, the NHC released its 2022 [No. 2 Announcement on 36 “Three New Foods”¹](#) [Including *Chlamydomonas reinhardtii*](#), which approved 36 new food materials and additives for use in China. The list included seven GMM derived enzymes (see Table 1), which, once approved, are considered common enzymes available for use in food processing and in foods with no specific labeling requirements. Please refer to [China Agricultural Biotechnology Annual 2021](#) for detailed information on the regulatory framework, application procedure, labeling, and traceability requirements of GMM derived enzymes.

NHC Announcement No. 2 follows the release on March 1, 2022, of NHC 2022 [No. 1 Announcement on 32 “Three New Foods” Including Guanshan Cherry Blossoms](#), which approved 32 new food materials and additives for use in China. The list included four GMM derived enzymes (see Table 3).

NHC’s Interpretation of the “Announcement on 36 “Three New Foods” including *Chlamydomonas reinhardtii*” can be found [here \(link in Chinese\)](#).

NHC’s Interpretation of the “Announcement on 32 “Three New Foods” including Guanshan Cherry Blossoms” can be found [here \(link in Chinese\)](#).

Table 1. China: NHC Approved GMM Derived Enzymes from May 2022 Announcement

No.	酶 Enzyme	来源 Host	供体 Donor
1	β-葡聚糖酶 β-glucanase	枯草芽孢杆菌 Bacillus subtilis	枯草芽孢杆菌 Bacillus subtilis
2	蛋白酶 Protease	枯草芽孢杆菌 Bacillus subtilis	克劳氏碱性卤杆菌 Alkalihalobacillus clausii
3	海藻糖酶 Trehalase	李氏木霉 Trichoderma reesei	李氏木霉 Trichoderma reesei
4	磷脂酶A1 Phospholipase A1	黑曲霉 Aspergillus niger	Talaromyces leycettanus
5	葡糖氧化酶 Glucose oxidase	黑曲霉 Aspergillus niger	产黄青霉 Penicillium chrysogenum
6	乳糖酶 Lactase	枯草芽孢杆菌 Bacillus subtilis	德氏乳杆菌保加利亚亚种 Lactobacillus delbrueckii subsp. bulgaricus
7	植酸酶 Phytase	黑曲霉 Aspergillus niger	塔宾曲霉 Aspergillus tubingensis

¹ “Three new foods” refers to new food raw materials, new varieties of food-related products and new varieties of food additives.

Table 2. China: NHC Approved Non-GMM Food Materials, Enzymes, and Additives from May 2022 Announcement

New food raw materials	No.	Product			
	1	Chlamydomonas reinhardtii			
	2	Bifidobacterium longum subsp. longum BB536			
	3	Sugarcane Polyphenols			
New varieties of enzyme preparations for food industry		Enzyme		Host	
	4	β-fructofuranosidase		Aspergillus fijiensis	
New varieties of processing aids for food industry		Product	Function	Usage Scope	Maximum Usage (g/kg)
	5	sodium sulfide pentahydrate	Deacidifying agent, decolorizing agent, sedimentation agent	Salt making process	0.065
Expanded use scope of food additives		Product	Function	Food Name	Maximum Usage (g/kg)
	6	Transglutaminase	Stabilizers and Coagulants	flavored fermented milk unripened cheese	0.3
	7	Magnesium chloride	Flavor enhancer	Instant Rice Noodle Products Frozen rice and flour products Compound seasoning	Used in moderation according to production needs
	8	Sucralose	Sweetener	Processed cheese	0.2
	9		Colorant	Modified milk,	0.05

		Lutein		flavored fermented milk	
	10	Acesulfame potassium	Sweetener	Biscuit	0.6
Expanded use of processing aids for food industry		Product	Function	Usage Scope	Maximum Usage (g/kg)
	11	polyacrylamide	Flocculant	Salt making process	
	12	Polydimethyl siloxane and emulsion	Defoamer	Production and processing technology of yeast processed products	0.1, based on polydimethylsiloxane
New varieties of food nutrition fortifiers		Product	Food Category		Maximum Usage (mg/kg)
	13	Inositol	Modified milk powder (children's milk powder only)		210 ~250
			Fruit and vegetable juice (meat) drinks (including fermented products, etc.)		60 ~120
			Flavored drink		60 ~120
			Food for special dietary use		Comply with the relevant standards for foods for special dietary use
New varieties of food contact materials and products		Product			
	14	Silicon dioxide coatings made from the monomers hexamethyldisiloxane and hexamethyldisilazane			
New varieties of additives for food contact materials and		Product			
	15	Phosphoric acid, zirconium(4 ⁺) salt (2:1)			
	16	Acids, aliphatic, monocarboxylic (C ₁₀ -C ₂₂), esters with polyglycerol			
	17	2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with methyl 2-			

products		methyl-2-propenoate	
	18	Hexanedioic acid, polymer with <i>N</i> -(2-aminoethyl)-1,3-propanediamine, aziridine, (chloromethyl)oxirane, 1,2-ethanediamine, <i>N,N'</i> -1,2-ethanediyl bis[1,3-propanediamine], formic acid and α -hydro- ω -hydroxypoly (oxy-1,2-ethanediyl)	
Expanded use scope of additives for food contact materials and products		Product	Usage Scope
	19	C.I. solvent red 52; 3-methyl-6-[(4methylphenyl)amino]-3 <i>H</i> dibenz[<i>f,i</i>]isoquinoline-2,7-dione	Plastic: Poly(1,4-cyclohexanedimethanol terephthalate) (PCT)
	20	C.I. pigment yellow 180	Plastic: Poly(1,4-cyclohexanedimethanol terephthalate) (PCT)
New varieties of resins for food contact materials and products		Product	Usage Scope
	21	Polymer of ethyl acrylate, acrylic acid, and styrene 2-ethylhexylester, methacrylic acid methyl ester	Paints and Coatings
	22	1,3-Benzenedicarboxylic acid, polymer with 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol and hexanedioic acid	Paints and Coatings
	23	1-isocyanato-3-isocyanatomethyl-3,5,5-trimethylcyclohexane homopolymer, methyl ethyl ketone oxime-blocked	Paints and Coatings
	24	1,4-Benzenedicarboxylic acid, 1,4-dimethyl ester, polymer with decanedioic acid, 2,2-dimethyl-1,3-propanediol, and 1,2-ethanediol	Paints and Coatings
	25	Polymer of 1,4-butanediol dimethacrylate, 2-hydroxyethyl methacrylate, ethyl acrylate, acrylic acid, and styrene	Paints and Coatings
	26	1,3-Benzenedicarboxylic acid, polymer with azacyclotridecan-2-one, 1,4-benzenedicarboxylic acid, dodecanedioic acid and	Plastic

		4,4'-methylene bis[2-methylcyclohexanamine]	
	27	1,3-Benzenedicarboxylic acid, polymer with 1,3-benzenedimethanamine and hexanedioic acid	Plastic
	28	Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 1,3-diisocyanatomethylbenzene and α -hydro- ω -hydroxypoly[oxy(methyl-1,2-ethanediyl)]	Adhesive (for indirect food contact)
	29	2-Propenoic acid, polymer with butyl 2-propenoate, ethenyl acetate and 2-ethylhexyl-2-propenoate	Adhesive (for indirect food contact)

Table 3. China: NHC Approved GMM Derived Enzymes from March 2022 Announcement

No.	酶 Enzyme	来源 Host	供体 Donor
1	磷脂酶A1 Phospholipase A1	米曲霉 Aspergillus oryzae	红聚颈腔菌 Valsaria rubricosa
2	麦芽糖淀粉酶 Maltogenic amylase	地衣芽孢杆菌 Bacillus licheniformis	嗜热脂解地芽孢杆菌 Geobacillus stearothermophilus
3	葡糖氧化酶 Glucose oxidase	李氏木霉 Trichoderma reesei	尼崎青霉菌 Penicillium amagasakiense
4	脂肪酶 Lipase	李氏木霉 Trichoderma reesei	黑曲霉塔宾变种 Aspergillus niger var. tubingensis

Table 4. China: NHC Approved Non-GMM Food Materials, Enzymes, and Additives from March 2022 Announcement

New food raw materials	No.	Product			
	1	Kanzan flower			
	2	Pyrroloquinoline quinone disodium (PQQ) salt			
		Product	Function	Food Name	Maximum Usage (g/kg)

Expanded use scope of food additives	3	Silica	Anticaking Agents	Other Soy Products (Soy Protein Powders and Formulated Soy Protein Powders Only)	15.0
	4	Carbon dioxide	Other	Flavored fermented milk	Used in moderation according to production needs
	5	Turmeric	Colorants	Batters (such as batter for fried fish and poultry), breading, frying powder	0.25
	6	Nisin	Preservative	Braised Semi-dried Tofu	0.5
	7	Sucralose	Sweetener	New soy products (soy protein and its puffed food, soy vegetarian meat, etc.)	0.4
	8	Vegetable carbon black	Colorant	Flavored fermented milk jam	5.0
Expanded use of processing aids for food industry		Product	Function	Usage Scope	Maximum Usage (g/kg)
	9	White mineral oil	Release agent, lubricant	Processing technology of fresh yeast products	0.1
New varieties of food contact materials		Product			
	10	Silicon dioxide coatings made from the monomers hexamethyldisiloxane and hexamethyldisilazane			

and products			
New varieties of additives for food contact materials and products		Product	
	11	2-Propenoic acid, polymer with 2,5-furandione and 2-propenamide, sodium salt	
	12	1,3,5-Triallyl-1,3,5-triazine-2,4,6 (1 <i>H</i> ,3 <i>H</i> ,5 <i>H</i>) -trione	
	13	C ₁₆₋₁₈ -Fatty acids, esters with pentaerythritol	
	14	Vitamin E (<i>dl-α</i> -Tocopherol acetate)	
	15	1-Decene, homopolymer, hydrogenated	
	16	Hexanedioic acid, polymer with 1,2-propanediol	
Expanded use scope of additives for food contact materials and products		Product	Usage Scope
	17	Maltodextrin	adhesive
	18	C.I. pigment blue 15	Plastic: Polylactic acid (PLA)
	19	C.I. pigment red 254	Plastic: Polylactic acid (PLA)
	20	Carbon black	Plastic: Polylactic acid (PLA)
	21	C.I. pigment yellow 180	Plastic: Polylactic acid (PLA)
	22	Hydroxyethyl cellulose	Rubber
	23	2-Propenoic acid, polymer with ethenylbenzene	Rubber
	24	2-Propenoic acid, polymer with sodium hypophosphite, sodium salt	paper and cardboard
	25	Rosin, ester with glycerol	paper and cardboard
New varieties of resins for food contact materials and products		Product	Usage Scope
	26	Copolymer of acrylic acid, styrene, acrylic acid ethyl ester, acrylic acid 2-ethylhexylester, methacrylic acid methyl ester	Adhesives (for indirect food contact)
	27	Polymer of cyclohexanedimethanol-1,4, ethylene glycol, 2,2-dimethyl-1,3-propanediol,	Paints and Coatings

		isophthalic acid, dimethyl terephthalate and trimellitic anhydride	
New varieties of disinfectant raw materials		Product	Usage Scope
	28	Peroxyoctanoic acid	1. Food contact surfaces of tools, equipment or food packaging materials that come into direct contact with food; 2, tableware, drinking utensils

Attachments:

No Attachments.