



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY
Safety of the Food Chain

**Food enzyme applications submitted to the Commission within the legal
deadline (from 11 September 2011 to 11 March 2015)**

According to Article 17(2) of Regulation (EC) No 1332/2008¹ interested parties may submit applications for the inclusion of a food enzyme in the Union list.

The deadline for submitting such applications started from 11 September 2011 and ended on 11 March 2015. The Commission has received 300 applications for their inclusion in such list.

Article 17(3) of the Regulation requires the Commission to establish a Register of all food enzymes to be considered for inclusion in the Union list provided that the applications comply with the validity criteria laid down in accordance with Article 12 of Regulation (EU) No 234/2011². The Register shall be made available to the public.

Due to the large number of food enzyme applications received and the fact that all the dossiers have to go through the validity assessment, it will take some time to establish the Register.

In the meantime, it is necessary for the purposes of information and transparency to publish the food enzyme applications submitted to the Commission.

The food enzyme applications have been listed in the Annex to this document and consists of four columns namely, the reference number, the food enzyme, the source and the strain where appropriate, and the indicative food uses.

This Annex has no legal value and cannot be considered as the Register. The Commission declines any and all responsibility for any inaccuracy, error or omission in relation to the information on the list. The European Commission fully excludes any and all liability of any kind to any person or entity that chooses to rely upon the information in the list.

In case any inaccuracies are detected in the Annex, the Commission would be grateful to be informed at the following email address: SANTE-E7-ENZYMES@ec.europa.eu.

¹ Regulation (EC) No 1332/2008 of the European Parliament and of the Council of 16 December 2008 on food enzymes (OJ L 354, 31.12.2008, p. 7)

² Commission Regulation (EU) No 234/2011 implementing Regulation (EC) No 1331/2008 of the European Parliament and of the Council establishing a common authorisation procedure for food additives, food enzymes and food flavourings (OJ L 11.03.2011, p.15)

Annex

Reference No	Food enzyme	Source	Indicative food uses
2012/01	Xylanase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-FB)	Starch processing Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2012/02	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-KE)	Starch processing Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Fruit and vegetable processing
2012/03	Triacylglycerol lipase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-LH)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2012/04	Alpha-amylase	<i>Aspergillus oryzae</i> (strain NZYM-NA)	Starch processing Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Fruit and vegetable processing
2012/05	Triacylglycerol lipase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-FL)	Oils and fat processing Eggs processing

2013/01	Triacylglycerol lipase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-AL)	Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Oils and fat processing
2013/02	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-AC)	Starch processing Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Cereal based processes Removal of starch in sugar processing Fruit and vegetable processing
2013/03	Asparaginase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-SP)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Potato processing Coffee processing
2013/04	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-BC)	Starch processing Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Cereal based processes Removal of starch in sugar processing Fruit and vegetable processing
2013/05	Amyloglucosidase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-BC)	Starch processing Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)

2013/06	Glucose oxidase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-KP)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2013/07	Thrombin	Cattle or pigs blood	Production of meat preparation, meat products, unprocessed and processed fish
2013/08	Maltogenic amylase	A genetically modified strain of <i>Bacillus subtilis</i> (strain MAM)	Production of bakery products
2013/09	Food enzyme consisting of Trypsin and Chymotrypsin	Pig pancreas	Foodstuffs intended for particular nutritional purposes Dairy processing
2013/10	Peroxidase	Soy bean hulls	Production of bakery products
2013/11	Xylanase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-FA)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2013/12	Xylanase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF5427)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Production of beer Grain processes Production of cereal based distilled alcoholic beverages
2013/13	Food enzyme consisting of Glucoamylase and Alpha-amylase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-BX)	Starch processing Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Fruit and vegetable processing
2013/14	Asparaginase	A genetically modified strain of <i>Aspergillus niger</i> (strain ASP)	Production of bakery products Potato processing Flavouring production

2013/15	Glucoamylase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-BE)	Starch processing Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Fruit and vegetable processing
2013/16	Triacylglycerol lipase	<i>Rhizopus oryzae</i> (strain AE-TL)	Production of bakery products Milk processing Fats and oils processing
2013/17	Triacylglycerol lipase	<i>Candida cylindracea</i> (strain AE-LAYH)	Production of bakery products Milk processing Oil and fat processing
2013/18	Leucyl aminopeptidase	<i>Aspergillus oryzae</i> (strain AE-MB)	Milk processing Protein hydrolysis Yeast processing
2013/19	Glucose oxidase	A genetically modified strain of <i>Aspergillus niger</i> (strain ZGL)	Production of bakery products
2013/20	Phosphodiesterase I	<i>Leptographium procerum</i> (strain FDA)	Yeast processing
2013/21	Alpha-galactosidase	A genetically modified strain of <i>Saccharomyces cerevisiae</i> (strain CBS 615-94)	All guar containing foods, intermediary products and food raw materials
2013/22	Glucose oxidase	<i>Aspergillus niger</i>	Production of bakery products Egg processing Fruit and vegetable processing
2013/23	Pectin lyase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF6199)	Fruit and vegetable processing Production of wine Grain processing

			Coffee processing
2013/24	Xylanase	A genetically modified strain of <i>Aspergillus acidus</i> (strain RF7398)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2013/25	Polygalacturonase	<i>Aspergillus aculeatus</i> (strain NZYM-RE)	Fruit and vegetable processing Production of wine
2013/25	Endo-1,3(4)- β -glucanase	<i>Aspergillus aculeatus</i> (strain NZYM-RE)	Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2013/26	Xylanase	A genetically modified strain of <i>Aspergillus niger</i> (strain CBS 612-94)	Production of bakery products
2013/27	Chymotrypsin	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-RH)	Protein hydrolysis
2013/28	Xylanase	A genetically modified strain of <i>Bacillus subtilis</i> (strain XAS)	Production of bakery products
2014/01	Xylanase	A genetically modified strain of <i>Aspergillus niger</i> (strain XYL)	Production of bakery products
2014/02	Alpha-amylase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-MC)	Starch processing Beverage alcohol processes Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2014/03	Glucoamylase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-BF)	Starch processing Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)

2014/04	Triacylglycerol lipase	A genetically modified strain of <i>Aspergillus niger</i> (strain LFS)	Production of bakery products
2014/05	AMP deaminase	<i>Aspergillus melleus</i> (strain AE-DN)	Yeast processing
2014/06	Leucyl aminopeptidase	<i>Rhizopus oryzae</i> (strain AE-PER)	Yeast processing Milk processing Protein hydrolysis
2014/07	Food enzyme consisting of Xylanase, Endo-1,3(4)- β -glucanase and Glucan 1,3- β -glucosidase	<i>Disporotrichum dimorphosporum</i> (strain DXL)	Production of beer and other cereal based beverages
2014/08	Xylanase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF5703)	Production of beer and other cereal based beverages Grain processing
2014/09	Asparaginase	A genetically modified strain of <i>Aspergillus niger</i> (strain AGN)	Production of bakery products Potato processing
2014/10	Polygalacturonase	A genetically modified strain of <i>Aspergillus niger</i> (strain EPG)	Fruit processing Flavouring production
2014/11	Trypsin	A genetically modified strain of <i>Fusarium venenatum</i> (strain NZYM-FG)	Protein hydrolysis
2014/12	Phospholipase A ₂	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF8793)	Fats and Oils processing Egg processing
2014/13	Alpha-amylase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-SB)	Starch processing Production of cereal based distilled alcoholic beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2014/14	Xylanase	<i>Trichoderma citrinoviride</i> (strain TCLSC)	Production of cereal based distilled alcoholic beverages

			Production of bakery products Production of beer and other cereal based beverages Fruit processing
2014/15	Xylanase	A genetically modified strain of <i>Trichoderma reesei</i> (strain DP-Nzd22)	Production of cereal based distilled alcoholic beverages Production of beer and other cereal based beverages Production of bakery products
2014/16	Alpha-amylase	<i>Microbacterium imperiale</i> (strain AE-AMT)	Starch processing Flavouring production
2014/17	Triacylglycerol lipase	<i>Penicillium roqueforti</i> (strain AE-LRF)	Oils and fats processing Production of bakery products Flavouring production Milk processing
2014/18	Acylglycerol lipase	<i>Penicillium camemberti</i> (strain AE-LG)	Oils and fats processing Flavouring production Milk/dairy processing
2014/19	Beta-galactosidase (lactase)	<i>Kluyveromyces lactis</i> (strain AE-KL)	Milk processing Flavouring production
2014/20	Alpha-L-arabinofuranosidase	<i>Aspergillus niger</i> (strain ARF)	Production of bakery products Fruit and vegetable processing Production of wine
2014/21	Beta-galactosidase (lactase)	<i>Bacillus circulans</i> (strain AE-LT)	Milk processing Production of Galacto-oligosaccharides Flavouring production
2014/22	Alpha-amylase	<i>Bacillus amyloliquefaciens</i> (strain BANSC)	Production of beer and other cereal based beverages Grain processing
2014/23	Beta-amylase	<i>Hordeum vulgare</i> (Barley)	Baking Production of beer and other cereal based

			beverages Production of cereal based distilled alcoholic beverages Starch processing
2014/24	Triacylglycerol lipase	<i>Rhizopus niveus</i> (strain AE-N)	Oils and fats processing Flavouring production
2014/25	Xylanase	A genetically modified strain of <i>Bacillus subtilis</i> (strain LMGS 28355)	Production of bakery products
2014/26	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-AV)	Starch processing Production of cereal based distilled alcoholic beverages
2014/27	Endo-1,3(4)- β -glucanase	<i>Humicola insolens</i> (strain NZYM-ST)	Production of beer and other cereal based beverages
2014/27	Xylanase	<i>Humicola insolens</i> (strain NZYM-ST)	Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2014/27	Cellulase	<i>Humicola insolens</i> (strain NZYM-ST)	Production of beer and other cereal based beverages
2014/28	Polygalacturonase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF6197)	Coffee processing Flavouring production Fruit and vegetable processing Grain processing Production of wine
2014/29	Pectinesterase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF6201)	Coffee processing Flavouring production Fruit and vegetable processing Grain processing Production of wine

2014/30	Alpha-glucosidase	<i>Aspergillus niger</i> (strain AE-TGU)	Production of bakery products Starch processing Flavouring processing
2014/31	Food enzyme consisting of Cellulase, Endo-1,3(4)- β -glucanase and Xylanase	<i>Talaromyces emersonii</i>	Production of bakery products Production of beer and other cereal based beverages Grain processing Production of cereal based distilled alcoholic beverages Yeast processing
2014/32	Food enzyme consisting of Cellulase, Endo-1,3(4)- β -glucanase and Xylanase	<i>Trichoderma reesei</i>	Production of bakery products Production of beer and other cereal based beverages Fruit and vegetable processing Grain processing Production of cereal based distilled alcoholic beverages Production of wine (not applicable for xylanase) Yeast processing
2014/33	Food enzyme consisting of Pectinase, Polygalacturonase, Pectinesterase, Pectin Lyase and Arabinase	<i>Aspergillus niger</i> (strain ASNSC)	Fruit and vegetable processing Production of wine
2014/34	Xylanase	<i>Bacillus pumilus</i> (strain BLXSC)	Production of bakery products Grain processing
2014/35	Mucorpepsin	<i>Rhizomucor miehei</i> (strain MMR 164)	Dairy processing Beverage processing
2014/36	Asparaginase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-SP)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Fruit and vegetable processing

			Coffee and cocoa processing
2014/37	Acid prolyl endopeptidase	A genetically modified strain of <i>Aspergillus niger</i> (strain GEP)	Production of beer and other cereal based beverages Production of cereal based distilled alcoholic beverages Protein hydrolysis Starch processing
2014/38	Beta-galactosidase (lactase)	A genetically modified strain of <i>Aspergillus niger</i> (strain TOL)	Dairy processing (whey processing)
2014/40	Alpha-amylase	<i>Bacillus licheniformis</i>	Production of beer and other cereal based beverages Flavouring production Grain processing Production of cereal based distilled alcoholic beverages Sugar beet and sugar cane processing Starch processing Vinegar production Yeast processing
2014/41	Alpha-amylase	A genetically modified strain of <i>Bacillus subtilis</i> (strain NBA)	Production of bakery products
2014/42	Alpha-amylase	<i>Aspergillus oryzae</i> (strain AE-AA)	Production of bakery products Yeast processing Flavouring production
2014/43	Lysophospholipase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-LP)	Starch processing Production of bakery products Oils and fats processing
2014/44	Aqualysin 1	A genetically modified strain of <i>Bacillus subtilis</i> (strain LMGS 25520)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2014/45	Phospholipase A ₁	A genetically modified strain of	Milk and dairy processing

		<i>Aspergillus oryzae</i> (strain NZYM-PP)	
2014/46	Maltogenic amylase	A genetically modified strain of <i>Bacillus subtilis</i> (strain NZYM-OC)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2014/47	Food enzyme consisting of Pectinase, Polygalacturonase, Pectinesterase, Pectin Lyase and Arabanase	<i>Aspergillus niger</i>	Cider and <i>poiré</i> processing Flavouring production Fruit and vegetable processing Production of wine
2014/48	Phospholipase A ₂	A genetically modified strain of <i>Aspergillus niger</i> (strain PLA)	Production of bakery products Egg processing Fats and Oils processing
2014/49	Pectinesterase	A genetically modified strain of <i>Aspergillus niger</i> (strain PME)	Fruit and vegetable processing Flavouring production
2014/50	Xylanase	A genetically modified strain of <i>Aspergillus niger</i> (strain XEA)	Production of bakery products Production of beer and other cereal based beverages
2014/51	Maltogenic amylase	A genetically modified strain of <i>Bacillus subtilis</i> (strain NZYM-SO)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2014/52	Asparaginase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain XEA)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Coffee and cocoa processing Fruit and vegetable processing
2014/53	Xylanase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-CE)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2014/54	Xylanase	A genetically modified strain of <i>Bacillus subtilis</i> (strain LMG5 24584)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)

2014/55	Food enzyme consisting of Trypsin, Chymotrypsin, Elastase and Carboxypeptidase	Porcine pancreatic glands	Dairy processing (whey processing intended for infant and follow on formulae, and food for special medical purposes)
2014/56	Cellulase	<i>Trichoderma viride</i> (AE-CT)	Fruits and vegetable processing Flavouring production
2015/01	Beta-amylase	<i>Triticum spp</i> (wheat)	Starch processing
2015/02	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-AN)	Starch processing Production of cereal based distilled alcoholic beverages
2015/03	Cyclomaltodextrin glucanotransferase	<i>Geobacillus stearothermophilus</i> (strain St-88)	Flavouring production
2015/05	Chymosin	A genetically modified strain of <i>Kluyveromyces lactis</i> (strain CIN)	Dairy processing
2015/06	Polygalacturonase	A genetically modified strain of <i>Aspergillus niger</i> (strain FLYSC)	Fruits and vegetable processing
2015/07	Pectinesterase	A genetically modified strain of <i>Aspergillus niger</i> (strain FLZSC)	Production of cereal based distilled alcoholic beverages (cider production) Fruit and vegetable processing
2015/08	Beta-galactosidase (lactase)	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-BT)	Milk and dairy processing
2015/09	Beta-mannanase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF6232)	Coffee processing Fruit and vegetable processing Oil processing
2015/10	Transglutaminase	<i>Streptoverticillium mobaraense</i> (strain S-8112)	Production of meat preparations, meat products, fish and fishery products Dairy processing Cereal based processes Fruit and vegetable processing

2015/11	Maltogenic amylase	A genetically modified strain of <i>Bacillus subtilis</i> (strain NZYM-SM)	Starch processing Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Production of beer and other cereal based beverages
2015/12	Glucanase	<i>Streptomyces violaceoruber</i> (strain pGlu)	Yeast processing Production of beer and other cereal based beverages
2015/13	Pullulanase	A genetically modified strain of <i>Bacillus subtilis</i> (strain NZYM-AK)	Starch processing
2015/14	Glucoamylase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-BW)	Starch processing Production of cereal based distilled alcoholic beverages
2015/15	Dextranase	<i>Chaetomium gracile</i> (strain ATCC 16153)	Sugar beet and sugar cane processing
2015/16	Chymosin	A genetically modified strain of <i>Kluyveromyces lactis</i> (strain CHY)	Dairy processing
2015/17	Pectin lyase	A genetically modified strain of <i>Aspergillus niger</i> (strain FLOSC)	Fruit and vegetable processing
2015/18	Subtilisin	<i>Bacillus licheniformis</i>	Flavouring production Oil production Protein hydrolysis Yeast processing
2015/19	Triacylglycerol lipase	Pregastric tissues of cattle, goat and sheep	Dairy processing Flavouring production
2015/20	Mucorpepsin	<i>Rhizomucor miehei</i>	Dairy processing
2015/21	Rennet	Fourth stomach of domesticated ruminants (cattle, buffalos, goats and sheeps)	Dairy processing
2015/22	Triacylglycerol lipase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-	Oil and fats processing

		DB)	
2015/23	Glucoamylase	<i>Rhizopus oryzae</i> (strain AE-G)	Production of bakery products Yeast processing Flavouring production
2015/24	Beta-Glucosidase	<i>Penicillium multicolor</i> (strain AE-GLY)	Fruit and vegetable processing Tea processing Production of wine Flavouring production
2015/25	Food enzyme consisting of cellulase as a main activity and cellulose 1,4- β -cellobiosidase and β -glucosidase as subsidiary activities)	<i>Talaromyces cellulolyticus/Talaromyces pinophilus</i> (strain Acremonium cellulolyticus)	Fruit and vegetable processing Starch processing Production of bakery products Production of beer and other cereal based beverages Production of wine Production of cereal based distilled alcoholic beverages Extraction of plant material used in infusions (e.g. tea) Flavouring production
2015/26	Peroxidase	A genetically modified strain of <i>Aspergillus niger</i> (strain MOX)	Dairy processing
2015/27	Beta-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-JA)	Starch processing-
2015/28	Triacylglycerol lipase	<i>Aspergillus niger</i> (strain AE-L)	Dairy processing Flavouring production
2015/29	Ribonuclease P	<i>Penicillium citrinum</i> (strain AE-RP)	Yeast processing Flavouring production
2015/30	Glutaminase	<i>Bacillus amyloliquefaciens</i> (strain AE-GT)	Dairy processing Egg processing Protein hydrolysis Yeast processing

			Flavouring production
2015/31	Oryzin	<i>Aspergillus melleus</i> (strain AE-P)	Production of bakery products Dairy processing Egg processing Production of meat and fish extract Yeast processing Flavouring production
2015/32	Triacylglycerol lipase	<i>Candida rugosa</i> (strain AE-LAY)	Production of bakery products Dairy processing Fats and Oils processing Fruit and vegetable processing Flavouring production
2015/33	Glucoamylase	<i>Aspergillus niger</i>	Production of bakery products Production of beer and other cereal based beverages Fruit and vegetable processing Production of cereal based distilled alcoholic beverages Starch processing Yeast processing
2015/34	Inulinase	A genetically modified strain of <i>Aspergillus niger</i> (strain MUCL 44346)	Production of fructo-oligosaccharides
2015/35	Invertase	<i>Saccharomyces cerevisiae</i>	All food/food processes
2015/36	Trypsin	Porcine pancreatic glands	Protein hydrolysis
2015/37	Triacylglycerol lipase	<i>Candida cylindracea</i>	Fats and Oils processing Dairy processing Flavouring production Production of bakery products Production of cereal based distilled alcoholic beverages Production of beer and other cereal based

			beverages
2015/38	Food enzyme consisting of Cellulase, Glucanase and Hemicellulase covering Xylanase and Mannanase	<i>Aspergillus niger</i>	Production of bakery products Production of beer and other cereal based beverages Flavouring production Fruit and vegetable processing Grain processing Production of cereal based distilled alcoholic beverages Production of wine Sugar processing -only for hemicellulases Yeast processing-only for hemicellulases
2015/39	Aspergillopepsin I	A genetically modified strain of <i>Trichoderma reesei</i> (strain DP-Nzq40)	Production of cereal based distilled alcoholic beverages Protein hydrolysis
2015/40	Food enzyme consisting of Trypsin and Chymotrypsin	Porcine pancreatic glands	Dairy processing
2015/41	Leucyl aminopeptidase	<i>Aspergillus oryzae</i> (strain NZYM-EX)	Protein hydrolysis Soya sauce manufacturing Production of beer and other cereal based beverages Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2015/42	Aspergillus nuclease S ₁	<i>Penicillium citrinum</i>	Yeast processing
2015/43	AMP deaminase	<i>Aspergillus melleus</i>	Yeast processing
2015/44	Triacylglycerol lipase	A genetically modified strain of <i>Hansenula polymorpha</i> (strain DP-Jzk33)	Production of bakery products
2015/45	Papain	<i>Carica papaya</i> (papaya)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Dairy processing Egg processing

			Protein hydrolysis Flavouring production Production of beer and other cereal based beverages Yeast processing
2015/46	Lysozyme	Hen's eggs	Dairy processing Production of beer and other cereal based beverages Production of wine
2015/47	Hexose oxidase	A genetically modified strain of <i>Hansenula polymorpha</i> (strain DP-Jza21)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2015/48	Pectin Lyase	A genetically modified strain of <i>Aspergillus niger</i> (strain NZYM-PN)	Fruit and vegetable processing Production of wine Coffee processing
2015/49	Xylanase	A genetically modified strain of <i>Bacillus subtilis</i> (strain LMG-S 27588)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2015/50	Beta-galactosidase (lactase)	<i>Kluyveromyces lactis</i>	Milk and Dairy processing
2015/51	Lysophospholipase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF7206)	Starch processing
2015/52	Carboxypeptidase C	A genetically modified strain of <i>Aspergillus niger</i> (strain PEG)	Dairy processing Meat processing Protein hydrolysis Flavouring production
2015/53	Protease	Edible Pumpkin, Squash or Gourd	Dairy processing
2015/54	Protease	Edible <i>Galium Verum</i> (Lady's bedstraw)	Dairy processing
2015/55	Protease	Edible Ginger roots	Dairy processing
2015/56	Protease	Edible Papaya	Dairy processing
2015/57	Protease	Edible parts of <i>Cynara</i> family (e.g.	Dairy processing

		thistle, artichoke)	
2015/58	Protease	Edible ectomycorrhizal mushrooms (e.g. truffles, porcini, morel, chantarelle)	Dairy processing
2015/59	Protease	Edible Pinapple	Dairy processing
2015/60	Protease	Edible kiwi	Dairy processing
2015/61	Protease	Edible fig	Dairy processing
2015/62	Maltogenic amylase	A genetically modified strain of <i>Escherichia coli</i> (strain BLASC)	Production of bakery products Starch processing Production of beer and other cereal based beverages
2015/63	Triacylglycerol lipase	A genetically modified strain of <i>Aspergillus niger</i> agg. (strain FL100SC)	Oils and fats processing
2015/64	Glucan 1,4-alpha-maltotetrahydrolase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain DP-Dzf24)	Production of bakery products Starch processing
2015/65	Catalase	<i>Aspergillus niger</i> (strain AE-CN)	Production of bakery products Dairy processing Egg processing Fruit and vegetable processing Meat and fish processing Flavouring production
2015/66	Pullulanase	<i>Klebsiella pneumoniae</i> (strain AE-PUL)	Starch processing
2015/67	Pullulanase	<i>Pullulanibacillus naganoensis</i> (strain AE-PL)	Starch processing
2015/68	Rhizopuspepsin	<i>Rhizopus niveus</i> (strain AE-N)	Production of beer and other cereal based beverages Protein hydrolysis Flavouring production
2015/69	Rennet paste	Fourth stomach of <i>Capra aegagrus</i>	Dairy processing

		<i>hircus</i> (goat), <i>Ovis aries</i> (sheep) and <i>Bos primigenius</i> (cattle)	
2015/70	Cellulase	A genetically modified strain of <i>Trichoderma reesei</i> (strain DP-Nzc36)	Production of beer and other cereal based beverages Starch processing Production of cereal based distilled alcoholic beverages
2015/71	Plant coagulant	Cardoon flowers of <i>Cynara cardunculus</i> .	Dairy processing
2015/72	Triacylglycerol lipase	A genetically modified strain of <i>Aspergillus niger</i> agg. (strain FL105SC)	Oils and fats processing
2015/73	Endo-1,3(4)- β -glucanase	A genetically modified strain of <i>Bacillus subtilis</i> (strain CBS 613.94)	Production of beer and other cereal based beverages Production of cereal based distilled alcoholic beverages Grain processing
2015/74	Cellulase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF5261)	Production of beer and other cereal based beverages Production of cereal based distilled alcoholic beverages Grain processing
2015/75	Isomaltulose synthase	<i>Protaminobacter rubrum</i> (strain Z12A)	Production of Isomaltulose (novel food)
2015/76	Food enzyme consisting of Protease, Leucyl aminopeptidase, Oryzin and Aspergillopepsin I	<i>Aspergillus oryzae</i>	Production of bakery products Dairy Processing Flavouring production Production of cereal based distilled alcoholic beverages Protein hydrolysis Yeast Processing

2015/77	Chitinase	<i>Streptomyces violaceoruber</i> (strain pChi)	Production of bakery products
2015/78	Phospholipase A ₂	<i>Streptomyces violaceoruber</i> (strain AS-10)	Production of bakery products Eggs processing Oils and fats processing Dairy processing
2015/79	Beta-galactosidase (lactase)	A genetically modified strain of <i>Escherichia coli</i> BglA MCB3	Dairy processing
2015/80	Food enzyme consisting of Aspergillopepsin I and Aspergillopepsin II	<i>Aspergillus niger</i> var. <i>macrosporus</i> (strain DBD-0406)	Production of wine
2015/81	Endo-1,3(4)- β -glucanase	<i>Talaromyces versatilis</i> (strain PF8)	Production of beer and other cereal based beverages Fruit and vegetable processing Production of wine Yeast processing
2015/82	Triacylglycerol lipase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain NZYM-PH).	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Protein hydrolysis Egg processing Production of beer and other cereal based processes Beverage processes
2015/83	4-Phytase	A genetically modified strain of <i>Trichoderma reesei</i> (strain DP-Nzt55)	Production of cereal based distilled alcoholic beverages
2015/84	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain DP-Dzb54)	Starch processing
2015/85	Pullulanase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain DP-Dzp39)	Production of beer and other cereal based beverages Production of cereal based distilled alcoholic

			beverages Starch processing
2015/86	Alpha-amylase	A genetically modified strain of <i>Trichoderma reesei</i> (strain DP-Nzb48)	Production of beer and other cereal based beverages Production of cereal based distilled alcoholic beverages
2015/87	Thermolysin	A genetically modified strain of <i>Geobacillus caldoproteolyticus</i> (strain DP-Fzj32)	Protein hydrolysis
2015/88	Cyclomaltodextrin glucanotransferase	<i>Geobacillus stearothermophilus</i> (strain AE-KCGT)	Starch processing Flavouring production
2015/89	Cyclomaltodextrin glucanotransferase	<i>Paenibacillus macerans</i> (strain AE-CGT)	Starch processing Flavouring production
2015/90	AMP deaminase	<i>Streptomyces murinus</i> (strain AE-DNTS)	Yeast processing Flavouring production
2015/91	Beta-galactosidase (lactase)	<i>Aspergillus oryzae</i> (strain AE-LA)	Milk and Dairy processing Flavouring production
2015/92	Dextranase	<i>Chaetomium erraticum</i> (strain AE-DX)	Sugar processing
2015/93	Beta-amylase	<i>Bacillus flexus</i> (strain AE-BAF)	Production of bakery products Starch processing Flavouring production
2015/94	Triacylglycerol lipase	<i>Mucor javanicus</i> (strain AE-LM)	Starch processing Flavouring production
2015/95	Endo-1,3(4)- β -glucanase	<i>Cellulosimicrobium cellulans</i> (strain AE-TN)	Production of bakery products Yeast processing Flavouring production
2015/96	Laccase	<i>Trametes hirsuta</i> (strain AE-OR)	Fruit and vegetable processing Tea processing Flavouring production
2015/97	Protein-glutamine glutaminase	<i>Chryseobacterium proteolyticum</i> (strain AE-PG)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)

			Dairy processing Meat and fish processing Protein hydrolysis Grain processing Yeast processing
2015/98	Alpha-L-rhamnosidase	<i>Penicillium decumbens</i> (strain AE-HP)	Fruit and vegetable processing
2015/99	Acylglycerol lipase	<i>Penicillium camemberti</i> (strain AE-LGS)	Dairy processing Flavouring production Fats and oils processing
2015/100	Chymosin	A genetically modified strain of <i>Aspergillus niger</i> var. <i>awamori</i> (strain DSM 29544)	Dairy processing
2015/101	Chymosin	A genetically modified strain of <i>Aspergillus niger</i> var. <i>awamori</i> (strain DSM 29545)	Dairy processing
2015/102	Chymosin	A genetically modified strain of <i>Aspergillus niger</i> var. <i>awamori</i> (strain DSM 29546)	Dairy processing
2015/103	Mucorpepsin	<i>Rhizomucor miehei</i> (strain DSM 29547)	Dairy processing
2015/104	Endothiapepsin	<i>Cryphonectria parasitica</i> (strain DSM 29549)	Dairy processing Flavouring production
2015/105	L-ascorbate oxidase	<i>Cucurbita pepo</i> and <i>Cucurbita moschata</i> (squash, pumpkins)	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks)
2015/106	Microbial collagenase	<i>Streptomyces violaceoruber</i> (strain pCol)	Meat processing Collagen hydrolysates
2015/107	Inulinase	<i>Aspergillus niger</i> (strain NZYM-KF)	Inulin processing
2015/108	Alpha-amylase	<i>Bacillus subtilis</i>	Production of bakery products Production of beer and other cereal based beverages

			Flavouring Production Production of cereal based distilled alcoholic beverages Starch processing Sugar processing Yeast processing
2015/109	Endo-1,3(4)- β -glucanase	A genetically modified strain of <i>Bacillus subtilis</i> (strain DP-Ezm28)	Production of beer and other cereal based beverages Production of cereal based distilled alcoholic beverages
2015/110	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain DP-Dzb44)	Production of cereal based distilled alcoholic beverages
2015/111	Bacillolysin	<i>Bacillus amyloliquefaciens</i>	Production of bakery products Production of beer and other cereal based beverages Dairy processing Flavouring Production Production of cereal based distilled alcoholic beverages Protein hydrolysis Yeast processing
2015/112	Beta-galactosidase (lactase)	A genetically modified strain of <i>Bacillus subtilis</i> (strain DP-Ezg29)	Dairy processing Production of galacto-oligosaccharides
2015/113	Xylanase	A genetically modified strain of <i>Bacillus subtilis</i> (strain DP-Ezd31)	Production of bakery products Grain processing
2015/114	Bacillolysin	<i>Bacillus subtilis</i>	Production of bakery products Production of beer and other cereal based beverages Dairy processing Flavouring Production

			Production of cereal based distilled alcoholic beverages Protein hydrolysis Yeast processing
2015/115	Invertase	<i>Aspergillus japonicus</i> (strain ATCC® 20611™)	Production of fructo-oligosaccharides
2015/116	Aspergillus nuclease S ₁	<i>Penicillium citrinum</i> (strain NP 11-15)	Production of nucleotide-rich food ingredients (nucleotide-rich fish hydrolysates from fish roe/tissues and nucleotide-rich yeast extracts from yeast)
2015/117	Alpha-amylase	<i>Bacillus amyloliquefaciens</i>	Production of bakery products Production of beer and other cereal based beverages Flavouring Production Production of cereal based distilled alcoholic beverages Starch processing Sugar processing Yeast processing
2015/118	Alpha-amylase	<i>Aspergillus oryzae</i> (strain L729-48)	Starch processing
2015/119	Catalase	<i>Aspergillus niger</i> (strain CTS 2093)	Production of food and beverages
2015/120	AMP deaminase	<i>Aspergillus oryzae</i> (strain DEA 262)	Yeast processing
2015/121	Glucose oxidase	<i>Penicillium chrysogenum</i> (strain PGO 19-162)	Food processing
2015/122	Mucorpepsin	<i>Rhizomucor miehei</i>	Dairy processing
2015/123	Tannase	<i>Aspergillus oryzae</i> (strain TAN 206)	Production of food and beverages
2015/124	Acetolactate decarboxylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain NZYM-JB)	Production of beer and other cereal based beverages Production of cereal based distilled alcoholic

			beverages
2015/125	Glucoamylase	<i>Rhizopus oryzae</i> (strain CU634-1775)	Starch processing Production of food and beverages
2015/126	Xylose isomerase	<i>Streptomyces murinus</i> (strain NZYM-GA).	Starch processing
2015/127	Polygalacturonase	<i>Talaromyces cellulolyticus</i> / <i>Talaromyces pinophilus</i>	Fruit and vegetable processing Production of cereal based distilled alcoholic beverages Plant extraction Coffee processing
2015/128	4-alpha-glucanotransferase	<i>Geobacillus pallidus</i> (strain AE-SAS)	Production of bakery products Starch processing
2015/129	Tannase	<i>Aspergillus niger</i> (strain AE-TAN)	Tea processing
2015/130	Thermolysin	<i>Geobacillus stearothermophilus</i> (strain AE-TP)	Dairy processing Egg processing Meat and fish processing Protein hydrolysis Yeast processing Flavouring production
2015/131	3-Phytase	<i>Aspergillus niger</i> (strain PHY93-08)	Grain processing Starch processing
2015/132	Alpha-amylase	<i>Aspergillus niger</i> (strain AS 29-286)	Starch processing
2015/133	Invertase	<i>Aspergillus niger</i> (strain IN 319)	Food/food processes Production of fructo-oligosaccharides
2015/133	Beta-glucosidase	<i>Aspergillus niger</i> (strain IN 319)	Fruit and vegetable processing Tea processing Production of cereal based distilled alcoholic beverages Production of beta-oligosaccharides Flavouring production
2015/134	Alpha-galactosidase	<i>Aspergillus niger</i> (strain AGS614)	Sugar processing

			Vegetable processing Flavouring production
2015/135	Beta-galactosidase (lactase)	<i>Aspergillus oryzae</i> (strain GL 470)	Milk and Dairy processing Fruit and vegetable juices Coffee-based beverages and Coffee extracts Production of galacto-oligosaccharides
2015/136	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain DP-Dzb52)	Production of beer and other cereal based beverages Production of cereal based distilled alcoholic beverages Starch processing
2015/137	Glucan 1,4-alpha- glucosidase	A genetically modified strain of <i>Trichoderma reesei</i> (strain DP-Nzh49)	Production of bakery products Production of beer and other cereal based beverages Production of cereal based distilled alcoholic beverages Starch processing
2015/138	Glucan 1,4-alpha- maltotetrahydrolase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain DP-Dzr46)	Production of bakery products
2015/139	Glucan 1,4- α - maltohydrolase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain DP-Dzr50)	Production of bakery products Production of beer Production of cereal based distilled alcoholic beverages Starch processing
2015/140	Glucoamylase	A genetically modified strain of <i>Trichoderma reesei</i> (strain DP-Nzh34)	Production of beer Production of cereal based distilled alcoholic beverages
2015/141	Phospholipase A ₂	Porcine pancreas	Eggs processing Flavourings production Yeast processing

2015/142	Cellulase	<i>Penicillium funiculosum</i> (strain DP-Lzc35)	Production of bakery products Production of beer Production of cereal based distilled alcoholic beverages
2015/143	Phospholipase D	<i>Streptomyces violaceoruber</i> (strain pPDN)	Production of modified lecithin Meat processing
2015/144	Lipase	A genetically modified strain of <i>Aspergillus niger</i> agg. (strain FL108SC)	Oil and fat processing
2015/145	Rennet	Fourth stomachs of young calves and sheep	Dairy processing
2015/146	Phospholipase D	<i>Streptomyces netropsis</i> (strain DSZM No 40093)	Oil and fat processing
2015/147	1,4-alpha-Glucan branching enzyme	<i>Geobacillus stearothermophilus</i> (strain TRBE14)	Cereal processing Production of bakery products Meat and fish processing
2015/148	Urease	<i>Lactobacillus fermentum</i> (strain 48/72)	Production of cereal based distilled alcoholic beverages Production of wine Production of beer
2015/149	Pectate lyase	<i>Bacillus subtilis</i> (strain 11096)	Production of seasonings
2015/150	Beta-amylase	<i>Glycine max</i> (soybean)	Starch processing
2015/151	Glucose oxidase	<i>Aspergillus niger</i> (strain NZYM-KA):	Production of bakery products and other cereal based products (e.g. pasta, noodles, snacks) Egg processing
2015/152	Membrane alanyl aminopeptidase	<i>Lactococcus lactis</i>	Dairy processing
2015/153	Beta-galactosidase (lactase)	<i>Sporobolomyces singularis</i> (strain YIT 10047)	Production of galacto-oligosaccharides
2015/154	Triacylglycerol Lipase	<i>Aspergillus niger</i> (strain NL 151)	Production of bakery products Dairy processing Production of beer

			Fats and oils processing Production of wine
2015/155	Aspergillopepsin I	<i>Aspergillus niger</i> (strain AP 233)	Production of bakery products Production of beer Fats and oils processing Meat and fish processing Herbs extracts
2015/156	Pectinase	<i>Rhizopus oryzae</i> (strain MC3-3-9)	Fruit and vegetable processing Tea-based beverages Tea extracts Flavouring production
2015/157	Alternansucrase	<i>Leuconostoc citreum</i> (strain NRRL B-30894)	Production of Sucromalt (novel food)
2015/158	Catalase	Porcine liver	Milk and dairy processing Egg processing Meat processing Fruit processing Production of wine Beverage processing
2015/159	4- α -D- $\{(1\rightarrow4)\text{-}\alpha$ -D-glucano}trehalose trehalohydrolase	<i>Arthrobacter ramosus</i>	Production of trehalose (novel food)
2015/160	(1 \rightarrow 4)- α -D-glucan 1- α -D-glucosylmutase	<i>Arthrobacter ramosus</i>	Production of trehalose (novel food)
2015/161	Alpha-amylase	<i>Bacillus circulans</i> / <i>Paenibacillus alginolyticus</i>	Starch processing
2015/162	Glucosyltransferase	<i>Bacillus circulans</i> / <i>Paenibacillus alginolyticus</i>	Starch processing
2015/163	Cyclomaltodextrin glucanotransferase	<i>Bacillus circulans</i>	Starch processing

2015/164	Isoamylase	<i>Pseudomonas amyloclavata</i>	Starch processing
2015/165	Beta Glucanase	<i>Trichoderma reesei</i> (strain MUCL 49754)	Starch processing Fruit and vegetable processing Beverage alcohol processes Production of wine Production of beer Production of bakery products Yeast processing Grain processing
2015/166	Endo-1,4-beta-xylanase	<i>Trichoderma reesei</i> (strain 49755)	Starch processing Beverage alcohol processes
2015/167	Ficin	<i>Ficus glabrata</i>	Yeast processing Production of beer and other cereal based beverages Production of bakery products Flavouring production Dairy processing Egg processing Soya processing Fish/meat processing
2015/168	Bromelain	<i>Ananas comosus</i>	Yeast processing Production of beer and other cereal based beverages Production of bakery products Flavouring production Dairy processing Egg processing Soya processing Meat and Fish processing
2015/169	Transglutaminase	<i>Streptomyces mobaraensis</i> , (strain DSM40587)	Dairy processing Meat and Fish processing Production of bakery products

			Grain processing Vegetable processing
2015/170	Alpha-amylase	A genetically modified strain of <i>Pseudomonas fluorescens</i> (strain BD15754)	Production of cereal based distilled alcoholic beverages Starch processing
2015/171	1,4-alpha-Glucan branching enzyme	A genetically modified strain of <i>Bacillus subtilis</i> (strain BR151 (pUAQ2))	Starch processing
2015/173	Plant coagulant	Cardoon flowers of <i>Cynara cardunculus</i>	Dairy processing
2015/174	Tannase	<i>Aspergillus oryzae</i> (strain NBRC110971)	Tea based beverages Herbs extracts
2015/175	Cyclomaltodextrin glucanotransferase	<i>Geobacillus stearothermophilus</i>	Starch processing
2015/176	Beta-galactosidase (lactase)	A genetically modified strain of <i>Aspergillus oryzae</i> (strain DP-Bzg59)	Dairy production Production of galacto-oligosaccharides
2015/177	Alpha, alpha-trehalase	A genetically modified strain of <i>Trichoderma reesei</i> (strain DP-Nzs51)	Production of cereal based distilled alcoholic beverages
2015/178	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain DP-Dzb45)	Production of cereal based distilled alcoholic beverages Production of beer
2015/179	Glucose oxidase	A genetically modified strain of <i>Aspergillus niger</i> (strain DP-Aze23)	Production of bakery products Egg processing
2015/180	Beta-galactosidase (lactase)	<i>Bacillus circulans</i> (strain M3-1)	Production of galacto-oligosaccharides.
2015/181	Alpha-amylase	<i>Geobacillus stearothermophilus</i> (strain DP-Gzb47)	Production of beer Production of cereal based distilled alcoholic beverages
2015/182	Alpha-amylase	<i>Aspergillus niger</i> (strain -Azb60)	Production of bakery products
2015/183	Glucan 1,4-alpha-	A genetically modified strain of	Production of cereal based distilled alcoholic

	glucosidase	<i>Trichoderma reesei</i> (strain DP-Nzh63)	beverages
2015/184	Subtilisin	A genetically modified strain of <i>Bacillus subtilis</i> (strain DP-Ezx62)	Protein hydrolysis
2015/185	Catalase	A genetically modified strain of <i>Aspergillus niger</i> (strain DP-Azw58)	Egg Processing
2015/186	Lactoperoxidase	Bovine milk Bovine cheese whey Bovine colostrum	Dairy processing
2015/187	D-psicose 3-epimerase	A genetically modified strain of <i>Escherichia coli</i> (strain W3110-TKO)	Production of allulose
2015/188	Transglutaminase	<i>Streptomyces mobaraense</i> (strain DSM 40587)	Meat and fish processing Dairy processing Production of bakery products Vegetables processing
2015/189	Triacylglycerol lipase	A genetically modified strain of <i>Trichoderma reesei</i> (strain RF10625)	Baking and other cereal based processes
2015/190	Phospholipase C	A genetically modified strain of <i>Pichia pastoris</i> (strain PRF)	Fats and oil processing
2015/191	Rennet paste	Fourth stomach of suckling lambs	Dairy processing
2015/192	Subtilisin	A genetically modified strain of <i>subtilis</i> (strain DP-Ezx42)	Protein hydrolysis
2015/193	Alpha-amylase	A genetically modified strain of <i>Aspergillus oryzae</i> (strain DP-Bzb41)	Production of bakery products Production of beer Production of cereal based distilled alcoholic beverages Starch processing
2015/194	Glucan 1,4-alpha-glucosidase	A genetically modified strain <i>Trichoderma reesei</i> (strain DP-	Production of bakery products Production of beer

		Nzh38)	Production of cereal based distilled alcoholic beverages Starch processing
2015/195	Alpha-amylase	A genetically modified strain of <i>Bacillus licheniformis</i> (strain of DP-Dzb25)	Production of beer Production of cereal based distilled alcoholic beverages Starch processing
2015/196	Xylose isomerase	A genetically modified strain of <i>Streptomyces rubiginosus</i> (strain DP-Pzn37)	Starch processing
2015/197	Mucorpepsin	<i>Rhizomucor miehei</i>	Dairy processing
2015/198	Catalase	Porcine liver	Dairy processing Egg processing
2015/199	4-alpha-glucanotransferase	A genetically modified strain of <i>Bacillus amyloliquefaciens</i> (strain MAS)	Starch processing
2015/200	Rennet	Fourth stomach of calves and cows	Dairy processing
2015/201	Cyclomaltodextrin glucanotransferase	A genetically modified strain of <i>E. coli K12</i> (strain WCM105xpCM703)	Production of alpha-cyclodextrin (novel food)
2015/202	Cyclomaltodextrin glucanotransferase	A genetically modified strain of <i>E. coli K12</i> (strain WCM105xpCM6420)	Production of gamma-cyclodextrin (novel food)
2015/203	Rennet	Fourth stomach of lambs and kids.	Dairy processing
2015/204	Plant coagulant	Cardoon flowers of <i>Cynara cardunculus var. sylvestris</i>	Dairy processing
2015/205	Alpha-amylase	A genetically modified strain of <i>Bacillus amyloliquefaciens</i> (strain DP-Czb53)	Starch processing
2015/206	D-Fructose 4-Epimerase	A genetically modified strain of <i>Corynebacterium glutamicum</i> (strain FIS003)	Production of tagatose (novel food)

2015/207	Plant coagulant	Cardoon flowers of <i>Cynara cardunculus var. sylvestris</i>	Dairy processing
2015/208	Aspergillopepsin I	<i>Aspergillus niger</i>	Production of cereal based distilled alcoholic beverages
2015/209	Alpha-amylase	<i>Bacillus subtilis</i>	Production of cereal based distilled alcoholic beverages
2015/210	Alpha-amylase	<i>Aspergillus oryzae</i>	Production of cereal based distilled alcoholic beverages
2015/211	Glucoamylase	<i>Aspergillus niger</i>	Production of cereal based distilled alcoholic beverages
2015/212	Triacylglycerol lipase	<i>Pichia pastoris</i>	Production of bakery products Cereal processing
2015/213	Rennet	Fourth stomach of kids	Dairy processing
2015/214	Pancreatin	Porcine pancreas and duodenum	Production of infant formula and food for special medical purposes