



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 23.7.2001

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COMMISSION REGULATION (EC) No .../..

of [...]

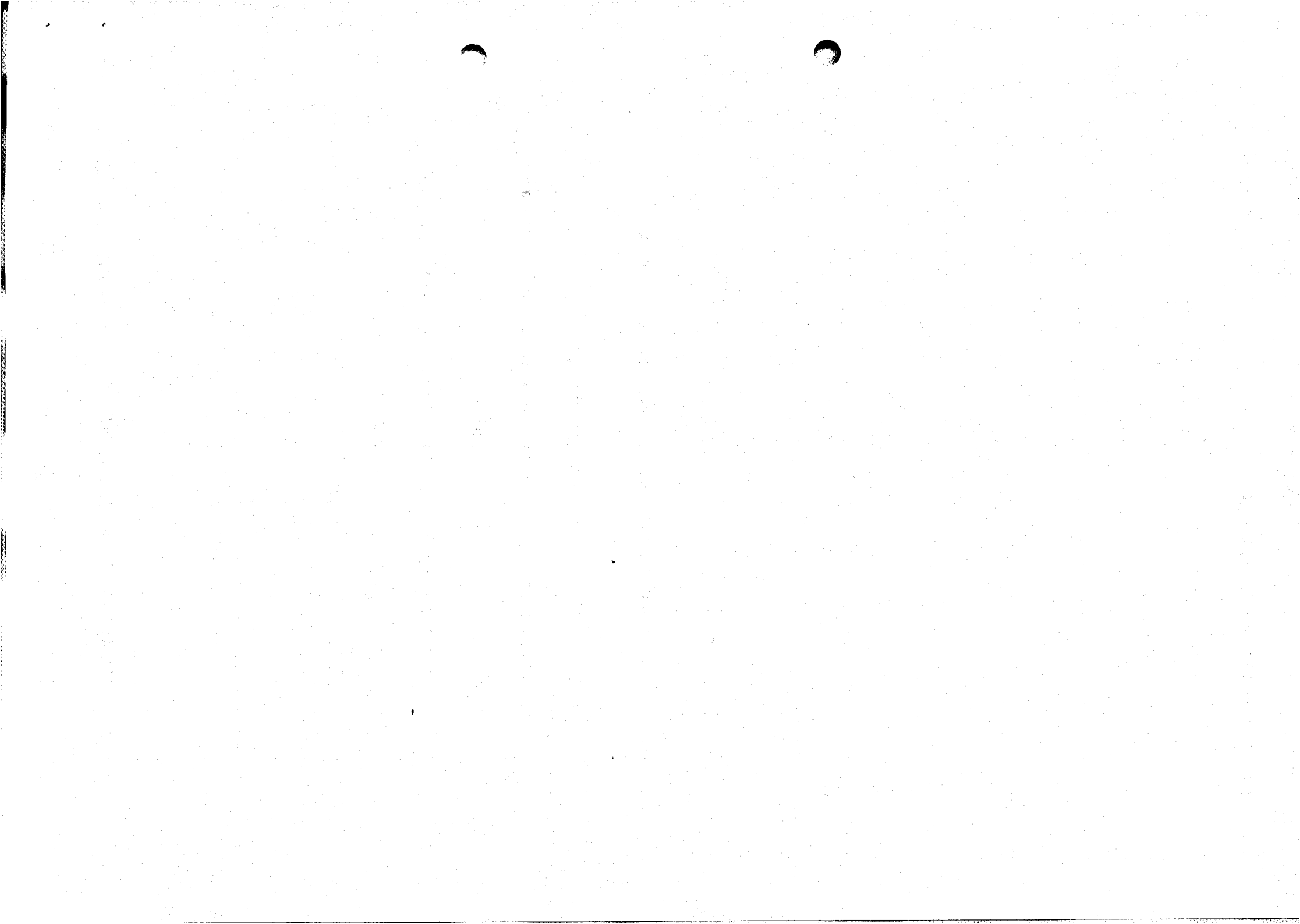
concerning provisional authorisations of additives in feedingstuffs

(Text with EEA relevance)

WORKING DOCUMENT DOES NOT NECESSARILY REPRESENT

THE VIEWS OF THE COMMISSION SERVICES

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Draft

COMMISSION REGULATION (EC) No .../..

of [...]

concerning provisional authorisation of additives in feedingstuffs

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Directive 70/524/EEC of 23 November 1970 concerning additives in feedingstuffs¹, as last amended by Council Directive 1999/20/EC², and in particular Articles 3, 9e and 9i thereof,

Whereas:

- (1) Articles 9e(1) and 9i(1) of the Directive provide that a provisional authorisation of a new additive or a new use of an additive may be given for a specific period.
- (2) Article 4 of the Directive establishes the procedure for such authorisation.
- (3) The current provisional authorisations of many additives expire on 30 September 2001, and it is appropriate to extend until the fourth or fifth anniversary, as the case may be, the initial provisional authorisation.
- (4) Provisional authorisations under this Regulation are granted for a specified period, but without prejudice to the possibility that they may be withdrawn at any time in accordance with Articles 9m and 11 of the Directive. In particular, authorisations for the use of antibiotics as additives in feedingstuffs are currently under review in the light of the fact that the Kingdom of Sweden has prohibited the use on its territory of all antibiotics as additives in feedingstuffs on the basis of article 11 of the Directive, and in the light of the first opinion issued on 28 May 1999 and the second opinion adopted on 10-11 May 2001 by the Scientific Steering Committee on antimicrobial resistance. The Commission is also examining the more general question of the use of antibiotics as additives in feedingstuffs.
- (5) The extension of the period of the provisional authorisations must be considered as a purely administrative measure involving no new evaluation of the concerned additives.
- (6) For readability and coherence reasons, all the provisional authorisations of additives in feedingstuffs, for which the duration may not exceed 4 or 5 years, are consolidated in this Regulation.

¹ OJ L 270, 14.12.1970, p. 1.

² OJ L 80, 25.3.1999, p. 20.

ANNEX

List of additives linked to a person responsible for putting them into circulation and authorised on a provisional basis for no longer than four years or five years in the case of additives which have been the subject of provisional authorisation before 1 April 1998

Registration number of additive	Name and registration number of person responsible for putting additive into circulation	Additive (trade name)	Composition, chemical formula, description	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
						mg of active substance /kg of complete feedingstuff			
Antibiotics									
33	Eli Lilly and Company Ltd	<p>Avilamycin 200 g/kg (Maxus G200, Maxus 200)</p> <p>Avilamycin 100 g/kg (Maxus G100, Maxus 100)</p>	<p>Additive composition:</p> <p>Avilamycin : 200 g activity / kg Soyabean oil or mineral oil : 5-30 g/kg Soyabean hulls qs 1 kg</p> <p>Avilamycin : 100 g activity /kg Soyabean oil or mineral oil : 5-30 g/kg Soyabean hulls qs 1 kg</p> <p>-----</p> <p>Active substance : Avilamycin, <chem>C57.62H82.90Cl1.2O31.32</chem> CAS number of avilamycin A : 69787-79-7, CAS number of avilamycin B : 73240-30-9, mixture of oligosaccharides of the orthosomycin group produced by <i>Streptomyces viridochromogenes</i> (NRRL 2860), in granular form.</p> <p>Factor composition: Avilamycin A: ≥ 60%. Avilamycin B: ≤ 18%. Avilamycins A+B: ≥ 70%. Other single avilamycins: ≤ 6%.</p>	Turkeys	-	5	10	-	14.12.2002 ^a

^a First authorisation : Commission Directive 97/72/EC (OJ L 351, 23.12. 1997, p.55)

Registration number of additive	Name and registration number of person responsible for putting additive into circulation	Additive (trade name)	Composition, nical formula, description	Species or category of animal	Maximum age	Minim. content	Maximum content	Other provisions	End of period of authorisation
						mg of active substance /kg of complete feedingstuff			
Coccidiostats and other medicinal substances									
26	Intervet International bv	Salinomycin sodium 120 g/kg (Sacox 120 microGranulate)	Additive composition: Salinomycin sodium : ≥ 120 g / kg Silicon dioxide : 10-100 g/ kg Calcium carbonate : 350-700 g/kg ----- Active substance : Salinomycin sodium, $C_{12}H_{69}O_{11}Na$, CAS number : 53003-10-4, sodium salt of a polyether monocarboxylic acid produced by fermentation of <i>Streptomyces albus</i> (DSM 12217) Related impurities: < 42 mg elaiophylin / kg salinomycin sodium. < 40 g 17-epi-20-desoxy-salinomycin / kg salinomycin sodium.	Chickens reared for laying	12 weeks	30	50	Indicate in the instructions for use: "Dangerous for equines". "This feedingstuff contains an ionophore: simultaneous use with certain medicinal substances (e.g. tiamulin) can be contra-indicated".	13.10.2001 ^b

^b First authorisation : Commission Directive 96/66/EC (OJ L 272, 25.10.1996, p. 32)

27	Janssen Animal Health B.V.B.A	<p>Diclazuril 0.5 g/100g (Clinacox 0.5 % Premix)</p> <p>Diclazuril 0.2 g/100g (Clinacox 0.2 % Premix)</p>	<p>Additive composition: Diclazuril : 0.5 g/ 100 g Soybean meal : 99.25 g/ 100g Polyvidone K 30 : 0.2 g /100g Sodium hydroxyde: 0.0538 g/100 g</p> <p>Diclazuril : 0.2 g/ 100 g Soybean meal : 39.7 g / 100 g Polyvidone K 30 : 0.08 g/ 100g Sodium hydroxide : 0.0215 g/ 100g Wheat middlings : 60 g / 100g</p> <p>-----</p> <p>Active substance : Diclazuril, $C_{17}H_{13}Cl_3N_4O_2$, (±)-4-chlorophenyl[2,6-dichloro-4-(2,3,4,5-tetrahydro-3,5-dioxo-1,2,4-triazin-2-yl)phenyl]acetonitrile, CAS number : 101831-37-2, Related impurities : Degradation compound (R064318) : ≤ 0.2% Other related impurities (R066891, R066896, R068610, R070156, R068584, R070016) : ≤ 0.5 % individually Total impurities : ≤ 1.5 %</p>	Chickens reared for laying	16 weeks	1	1		14.12.2002 ^a
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^a First authorisation : Commission Directive 97/72/EC (OJ L 351, 23.12.1997, p. 55)

28	Alpharma AS	Maduramicin ammonium alpha 1 g/100g (Cygro 1%)	Additive composition Maduramicin ammonium alpha : 1 g/ 100 g Benzyl alcohol : 5 g/100 g Corn cob grits qs 100g ----- Active substance : Maduramicin ammonium alpha, $C_{17}H_{23}O_{17}N$, CAS number : 84878-61-5, ammonium salt of a polyether monocarboxylic acid produced by <i>Actinomadura yumaensis</i> (ATCC 31585) (NRRL 12515). Related impurities : Maduramicin ammonium beta : < 10%	Turkeys	16 weeks		5	Use prohibited at least 5 days before slaughter. Indicate in the instructions for use: "Dangerous for equines". "This feedingstuff contains an ionophore: simultaneous use with certain medicinal substances (e.g. tiamulin) can be contra-indicated".	13.10.2001 ^b
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^b First authorisation : Commission Directive 96/66/EC (OJ L 272, 25.10.1996, p. 32)

Registration number of additive	Name and registration number of person responsible for putting additive into circulation	Additive (trade name)	Composition, chemical formula, description	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
						mg of active substance /kg of complete feedingstuff			
Growth promoters									
1	Norsk Hydro Ltd	Potassium diformate (Formi™ LHS)	Additive composition: Potassium diformate, solid 98g /100g, Silicate 1,5 g /100g, Water 0,5 g/100 g ----- Active substance : Potassium diformate, solid $\text{KH}(\text{COOH})_2$ CAS number 20642-05-1	Piglets	2 months	6000	6000	-	30.06.2005 ^s
				Pigs for fattening	-	6000	6000	-	30.06.2005 ^s

^s First authorisation Commission Regulation (EC) N° 1334/2001 (OJ L 180, 3.7.2001, p. 18)

^s First authorisation Commission Regulation (EC) N° 1334/2001 (OJ L 180, 3.7.2001, p. 18)

List of other additives authorised on a provisional basis for no longer than four years or five years in the case of additives which have been the subject of provisional authorisation before 1 April 1998

No. (or EC No.)	Additive	Chemical formula, description	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg/kg of complete feedingstuff			
Colourants, including pigments								
1. Carotenoids and xanthophylls:								
E160a	Beta-carotene	C ₄₀ H ₅₆	Canaries	-	-	-	-	14.12.2003 ^c
E 161g	Canthaxanthin	C ₄₀ H ₅₂ O ₂	Pet and ornamental birds	-	-	-	-	14.12.2003 ^c
12	Astaxanthin-rich <i>Phaffia rhodozyma</i> (ATCC 74219)	Concentrated biomass of the yeast <i>Phaffia rhodozyma</i> (ATCC 74219), killed, containing at least 4.0 g astaxanthin per kilogram of additive and having a maximum ethoxyquin content of 2 000 mg/kg.	Salmon	-	-	100	The maximum content is expressed as astaxanthin. Use permitted only from the age of six months onwards. The mixture of the additive with canthaxanthin is allowed provided that the total concentration of astaxanthin and canthaxanthin does not exceed 100 mg/kg in the complete feedingstuff. Ethoxyquin content to be declared.	14.12.2003 ^c
			Trout	-	-	100	The maximum content is expressed as astaxanthin. Use permitted only from the age of six months onwards. The mixture of the additive with canthaxanthin is allowed provided that the total concentration of astaxanthin and canthaxanthin does not exceed 100 mg/kg in the complete feedingstuff. Ethoxyquin content to be declared.	14.12.2003 ^c

^c First authorisation Commission Regulation (EC) N° 2316/98 (OJ L 289, 28.10.1998, p. 4)

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^c First authorisation Commission Regulation (EC) N° 2316/98 (OJ L 289, 28.10.1998, p. 4)

2. Other colourants:

E 102	Tartrazine	$C_{16}H_9N_4O_9S_2Na_3$	Grain-eating ornamental birds	-	-	150	-	30.09.2004 ^P
			Small rodents	-	-	150	-	30.09.2004 ^P
E 110	Sunset Yellow FCF	$C_{16}H_{10}N_2O_7S_2Na_2$	Grain-eating ornamental birds	-	-	150	-	30.09.2004 ^P
			Small rodents	-	-	150	-	30.09.2004 ^P
E 131	Patent Blue V	Calcium salt of the disulphonic acid of m-hydroxytetraethyl diamino triphenylcarbinol anhydride	Grain-eating ornamental birds	-	-	150	-	30.09.2004 ^P
			Small rodents	-	-	150	-	30.09.2004 ^P
E 141	Chlorophyll copper complex	-	Grain-eating ornamental birds	-	-	150	-	30.09.2004 ^P
			Small rodents	-	-	150	-	30.09.2004 ^P

^P First authorisation Commission Regulation (EC) N° 2697/2000 (OJ L 319, 16.12.2000, p. 1)

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No. (or EC No.)	Element	Additive	Chemical formula	Maximum content of the element in mg of complete feedingstuff	Other provisions	End of period of authorisation
Trace elements						
E4	Copper-Cu	Copper-lysine sulphate	Cu(C ₆ H ₁₃ N ₂ O ₂) ₂ .SO ₄	<p>Pigs for fattening:</p> <ul style="list-style-type: none"> - in Member States where the mean density of the porcine population is equal to or higher than 175 pigs per 100 ha of utilizable agricultural land: <ul style="list-style-type: none"> - up to 16 weeks: 175 (total) - in Member States where the mean density of the porcine population is lower than 175 pigs per 100 ha of utilizable agricultural land: <ul style="list-style-type: none"> - up to 16 weeks: 175 (total) 	<p>Not more than 50 mg/kg of copper in the complete feedingstuff may come from copper-lysine sulphate.</p>	
				<p>Pigs for fattening :</p> <ul style="list-style-type: none"> - in Member States where the mean density of the porcine population is equal to or higher than 175 pigs per 100 ha of utilizable agricultural land : <ul style="list-style-type: none"> - from 17th week up to slaughter: 35 (total) - in Member States where the mean density of the porcine population is lower than 175 pigs per 100 ha of utilizable agricultural land : <ul style="list-style-type: none"> - from 17th week up to six months: 100 (total) - over six months up to slaughter: 35 (total) <p>Breeding pigs: 35 (total)</p> <p>Other species or categories of animals, with the exception of calves prior to the start of rumination and sheep: 35 (total)</p>	<p>Not more than 25 mg/kg of copper in the complete feedingstuffs may come from copper-lysine sulphate.</p>	

^d First authorisation Commission Regulation(EC) N°639/1999 (OJ L 82, 26.3.1999, p. 6)

^d First authorisation Commission Regulation(EC) N°639/1999 (OJ L 82, 26.3.1999, p. 6)

No. (or EC No.)	Additive	Chemical formula, description	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg/kg of complete feedingstuff			
Binders, anti-caking agents and coagulants								
3	Clinoptilolite of volcanic origin	Calcium hydrated aluminosilicate of volcanic origin containing a minimum of 85% of clinoptilolite and a maximum of 15% of feldspar, micas and clays free of fibres and quartz Maximum lead content: 80 mg/kg	Pigs	-	-	20 000	All feedingstuffs	21.04.2004 ^e
			Rabbits	-	-	20 000	All feedingstuffs	21.04.2004 ^e
			Poultry	-	-	20 000	All feedingstuffs	21.04.2004 ^e

^e First authorisation Commission regulation (EC) N° 1245/1999 (OJ L 150, 17.6.1999, p. 15.)

^e First authorisation Commission regulation (EC) N° 1245/1999 (OJ L 150, 17.6.1999, p. 15.)

^e First authorisation Commission regulation (EC) N° 1245/1999 (OJ L 150, 17.6.1999, p. 15.)

4	Clinoptilolite of sedimentary origin	Hydrated calcium aluminosilicate of sedimentary origin containing at least 80% clinoptilolite and a maximum 20% of clay minerals, free of fibres and quartz. Maximum content in dioxins ⁴	Pigs for fattening	-	-	20 000	All feedingstuffs	26.9.2004 ¹
			Chickens for fattening	-	-	20 000	All feedingstuffs	26.09.2004 ¹
			Turkeys for fattening	-	-	20 000	All feedingstuffs	26.09.2004 ¹
			Bovines	-	-	20 000	All feedingstuffs	26.09.2004 ¹
			Salmon	-	-	20 000	All feedingstuffs	26.09.2004 ¹

¹ First authorisation Commission Regulation (EC) N°1887/2000 (OJ L 227, 7.9.2000, p. 13)

⁴ In the absence of the establishment, if required, of a specific maximum limit based on sufficient data on the presence of dioxins, the maximum limit of 500 pg WHO-PCCD/F-TEQ/kg will apply from 15 October 2000.

¹ First authorisation Commission Regulation (EC) N°1887/2000 (OJ L 227, 7.9.2000, p. 13)

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No. (or EC No.)	Additive	Chemical formula, description	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					Units of activity/kg of complete feedingstuff			
Enzymes								
1	3-phytase EC 3.1.3.8	Preparation of 3-phytase produced by <i>Aspergillus niger</i> (CBS 114.94) having a minimum phytase activity of 5000 FTU ⁵ /g for solid and liquid preparations	Turkeys	-	125 FTU	-	<p>1. Indicate in the directions for use for the additive and the premixture the storage temperature, storage duration and stability on pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 200-800 FTU.</p> <p>3. For use in compound feedingstuffs with a minimum content of 0.3% phytate, e.g. 20% wheat.</p>	14.12.2003 ^c

⁵ 1 FTU is the amount of enzyme which liberates 1 micromole of inorganic phosphate per minute from sodium phytate at pH 5.5 and 37°C

^c First authorisation Commission Regulation (EC) N° 2316/98 (OJ L 289, 28.10.1998, p. 4)

2	3-Phytase EC 3.1.3.8	Preparation of 3-phytase produced by <i>Aspergillus oryzae</i> (DSM 10 289) having a minimum activity of: Coated form: 2 500 FYT ⁶ /g Liquid form: 5 000 FYT/g	Piglets	4 months	250 FYT	1 000 FYT	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff : 500 FYT.</p> <p>3. For use in compound feed rich in phytates, e.g. containing more than 40% cereals (maize, barley, oats, wheat, rye, triticale), oilseeds and pulses.</p>	30.06.2004 ^f
			Pigs for fattening	-	400 FYT	1 000 FYT	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff : 500 FYT</p> <p>3. For use in compound feed rich in phytates, e.g. containing more than 40% cereals (maize, barley, oats, wheat, rye, triticale), oilseeds and pulses.</p>	30.06.2004 ^f
			Chickens for fattening	-	200 FYT	1 000 FYT	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff : 500 FYT.</p> <p>3. For use in compound feed rich in phytates, e.g. containing more than 40% cereals (maize, barley, oats, wheat, rye, triticale), oilseeds and pulses.</p>	30.06.2004 ^f

⁶ 1 FYT is the amount of enzyme which liberates 1 micromole of inorganic phosphate per minute from sodium phytate at pH 5.5 and 37°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

			Laying hens	-	500 FYT	1 000 FYT	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 750 FYT</p> <p>3. For use in compound feed rich in phytates, e.g. containing more than 40% cereals (maize, barley, oats, wheat, rye, triticale), oilseeds and pulses.</p>	30.06.2004 ^e
3	Alpha-galactosidase EC 3.2.1.22	Preparation of alpha-galactosidase produced by <i>Aspergillus oryzae</i> (DSM 10 286) having a minimum activity of: Liquid form : 1 000 GALU ⁷ /g	Chickens for fattening	-	300 GALU	1 000 GALU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff : 450 GALU.</p> <p>3. For use in compound feed rich in oligosaccharides, e.g. containing more than 25% soy meal, cotton seed cakes, peas.</p>	30.06.2004 ^f

^e First authorisation Commission Regulation (EC) N°866/1999 (OJ L 108, 27.4.1999, p. 21)

⁷ 1 GALU is the amount of enzyme which hydrolyses 1 micromole of p-nitrophenyl-alpha-galactopyranoside per minute at pH 5.5 and 37 °C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

4	Endo-1,3(4)-beta-glucanase EC 3.2.1.6	Preparation of endo-1,3(4)-beta-glucanase produced by <i>Aspergillus aculeatus</i> (CBS 589.94) having a minimum activity of: Coated form: 50 FBG ⁸ /g Liquid form: 120 FBG/ml	Piglets	4 months	25 FBG	40 FBG	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 25 FBG.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 50% maize or barley.</p>	30.06.2004 ^f
			Chickens for fattening	-	10 FBG	100 FBG	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 20 FBG.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 60% maize.</p>	01.04.2004 ^l

⁸ 1 FBG is the amount of enzyme which liberates 1 micromole of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 5.0 and 30° C.

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^l First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

5	Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-xylanase produced by <i>Aspergillus oryzae</i> (DSM 10287) having a minimum activity of: Coated form: 1 000 FXU ⁹ /g Liquid form: 650 FXU/ml	Chickens for fattening	-	80 FXU	200 FXU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff : 150 FXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 50% wheat.</p>	30.6.2004 ^f
			Turkeys for fattening	-	225 FXU	600 FXU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff : 225-600 FXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 50% wheat.</p>	30.6.2004 ^f
			Piglets	4 months	200 FXU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff : 200 FXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 50% wheat.</p>	30.6.2004 ^f

⁹ 1 FXU is the amount of enzyme which liberates 7.8 micromoles of reducing sugars (xylose equivalents) from azo-wheat arabinoxylan per minute at pH 6.0 and 50°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

6	<p>Endo-1,4-beta-xylanase EC 3.2.1.8</p> <p>Endo-1,4-beta-glucanase EC 3.2.1.4</p>	<p>Preparation of endo-1,4-beta-xylanase and endo-1,4-beta-glucanase produced by <i>Humicola insolens</i> (DSM 10442) having a minimum activity of:</p> <p>Coated form : 800 FXU¹⁰/g 75 FBG¹¹/g</p> <p>Microgranulated form : 800 FXU/g 75 FBG/g</p> <p>Liquid form : 550 FXU/ml 50 FBG/ml</p>	Chickens for fattening	-	200 FXU 19 FBG	1000 FXU 94 FBG	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff : 400 FXU 38 FBG.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30 % barley and/or oats, wheat.</p>	30.6.2004 ^f
			Piglets	4 months	240 FXU 22 FBG	1000 FXU 94 FBG	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 400 FXU 38 FBG.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30 % barley and/or oats, wheat.</p>	30.6.2004 ^f

¹⁰ 1 FXU is the amount of enzyme which liberates 3.1 micromoles of reducing sugars (xylose equivalents) from azo-wheat arabinoxylan per minute at pH 6.0 and 50°C

¹¹ 1 FBG is the amount of enzyme which liberates 1 micromole of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 5.0 and 30 °C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

			Pigs for fattening	-	200 FXU 19 FBG	800 FXU 75 FBG	<p>1. In the conditions of use of the additive and premixture, indicate the storage temperature, storage life, and the stability to pelleting.</p> <p>2. Recommended dose per kg of feedingstuff: 400 FXU 38 FBG.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30% barley, and/or oats, wheat.</p>	30.6.2004 ^h
7	<p>Endo-1,4-beta-xylanase EC 3.2.1.8</p> <p>Endo-1,4-beta-glucanase EC 3.2.1.4</p>	<p>Preparation of endo-1,4-beta-xylanase and endo-1,4-beta-glucanase produced by <i>Aspergillus niger</i> (CBS 600.94) having a minimum activity of:</p> <p>Coated form: 36 000 FXU¹²/g 15 000 BGU¹³/g</p> <p>Liquid form: 36 000 FXU/g 15 000 BGU/g</p>	Chickens for fattening	-	3 600 FXU 1 500 BGU	12 000 FXU 5 000 BGU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 3 600 - 6 000 FXU 1 500- 2 500 BGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 35% barley and 20% wheat.</p>	01.04.2004 ^l

^h First authorisation Commission Regulation (EC) N° 1411/99 (OJ L 164, 30.6.1999, p. 56)

¹² 1 FXU is the amount of enzyme which liberates 0,15 micromoles of xylose from azurine-cross-linked xylan per minute at pH 5,0 and 40°C

¹³ 1 BGU is the amount of enzyme which liberates 0,15 micromoles of glucose from azurine-cross-linked beta-glucan per minute at pH 5,0 and 40°C

^l First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

			Piglets	4 months	6 000 FXU 2 500 BGU	- -	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 6 000 FXU 2 500 BGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30% wheat and 30% barley.</p>	01.04.2004 ¹
			Turkeys for fattening	-	6 000 FXU 2 500 BGU	12. 000 FXU 5 000 BGU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 6 000 - 12 000 FXU 2 500- 5 000 BGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 40% wheat.</p>	01.04.2004 ¹

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

			Laying hens	-	12 000 FXU 5 000 BGU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 12 000 FXU 5 000 BGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 20% wheat, 10% barley and 20% sunflower.</p>	01.04.2004 ¹
		Preparation of endo-1,4-beta-xylanase and endo-1,4-beta-glucanase produced by <i>Aspergillus niger</i> (CBS 600.94) having a minimum activity of:	Chickens for fattening	-	3 600 FXU 1 500 BGU	12 000 FXU 5 000 BGU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 3 600 - 6 000 FXU 1 500- 2 500 BGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 35% barley and 20% wheat.</p>	30.9.2004 ^p
		<p>Solid form: 36 000 FXU¹⁴/g 15 000 BGU¹⁵/g</p>						

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

¹⁴ 1 FXU is the amount of enzyme which liberates 0,15 micromoles of xylose from azurine-cross-linked xylan per minute at pH 5,0 and 40°C

¹⁵ 1 BGU is the amount of enzyme which liberates 0,15 micromoles of glucose from azurine-cross-linked beta-glucan per minute at pH 5,0 and 40°C

^p First authorisation Commission Regulation(EC) N° 2697/2000 (OJ L 319, 16.12.2000)

			Piglets	4 months	6 000 FXU 2 500 BGU	- -	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 6 000 FXU, 2 500 BGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30% wheat and 30% barley.</p>	30.09.2004 ^P
			Turkeys for fattening	-	6 000 FXU 2 500 BGU	12. 000 FXU 5 000 BGU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 6 000 - 12 000 FXU 2 500- 5 000 BGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 40% wheat.</p>	30.09.2004 ^P

^P First authorisation Commission Regulation(EC) N° 2697/2000 (OJ L 319, 16.12.2000)

^P First authorisation Commission Regulation(EC) N° 2697/2000 (OJ L 319, 16.12.2000)

			Laying hens	-	12 000 FXU 5 000 BGU	- -	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 12 000 FXU 5 000 BGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 20% wheat, 10% barley and 20% sunflower.</p>	30.09.2004 ^p
8	<p>Endo-1,4-beta-glucanase EC 3.2.1.4</p> <p>Endo-1,4-beta-xylanase EC 3.2.1.8</p>	<p>Preparation of Endo-1,4-beta-glucanase and Endo-1,4-beta-xylanase produced by <i>Aspergillus niger</i> (CBS 600.94) having a minimum activity of:</p> <p>Coated form : 10 000 BGU¹⁶/g 4 000 FXU¹⁷/g</p> <p>Liquid form: 20 000 BGU/g 8 000 FXU/g</p>	Chickens for fattening	-	3 000 BGU 1 200 FXU	10 000 BGU 4 000 FXU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 3 000- 10 000 BGU 1 200- 4 000 FXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 60% barley.</p>	01.04.2004 ¹

^p First authorisation Commission Regulation(EC) N° 2697/2000 (OJ L 319, 16.12.2000)

¹⁶ 1 BGU is the amount of enzyme which liberates 0,15 micromoles of glucose from azurine-cross-linked beta-glucan per minute at pH 5,0 and 40°C

¹⁷ 1 FXU is the amount of enzyme which liberates 0,15 micromole of xylose from azurine-cross-linked xylan per minute at pH 5,0 and 40°C

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

			Piglets	4 months	3 000 BGU 1 200 FXU	5 000 BGU 2 000 FXU	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 3 000 - 5 000 BGU 1 200 - 2 000 FXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 30% barley.</p>	01.04.2004 ¹
			Laying hens	-	5 000 BGU 2 000 FXU	- -	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 5 000 BGU 2 000 FXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 60% barley.</p>	01.04.2004 ¹

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

		Preparation of Endo-1,4-beta-glucanase and Endo-1,4-beta-xylanase produced by <i>Aspergillus niger</i> (CBS 600.94) having a minimum activity of: Solid form: 20 000 BGU ¹⁸ /g 8 000 FXU ¹⁹ /g	Chickens for fattening	-	3 000 BGU 1 200 FXU	10 000 BGU 4 000 FXU	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 3 000- 10 000 BGU 1 200- 4 000 FXU. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 60% barley.	30.09.2004 ^P
			Piglets	4 months	3 000 BGU 1 200 FXU	5 000 BGU 2 000 FXU	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 3 000 - 5 000 BGU 1 200 - 2 000 FXU 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 30% barley.	30.09.2004 ^P

¹⁸ 1 BGU is the amount of enzyme which liberates 0,15 micromoles of glucose from azurine-cross-linked beta-glucan per minute at pH 5,0 and 40°C

¹⁹ 1 FXU is the amount of enzyme which liberates 0,15 micromole of xylose from azurine-cross-linked xylan per minute at pH 5,0 and 40°C

^P First authorisation Commission Regulation(EC) N° 2697/2000 (OJ L 319, 16.12.2000)

^P First authorisation Commission Regulation(EC) N° 2697/2000 (OJ L 319, 16.12.2000)

			Laying hens	-	5 000 BGU 2 000 FXU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 5 000 BGU 2 000 FXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 60% barley.</p>	30.09.2004 ^p
9	Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-xylanase produced by <i>Aspergillus niger</i> (CBS 270.95) having a minimum activity of: Solid form: 28 000 EXU ²⁰ /g Liquid form: 14 000 EXU/ml	Chickens for fattening	-	1 400 EXU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 1 400 EXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 50% wheat.</p>	30.06.2004 ^f

^p First authorisation Commission Regulation (EC) N° 2697/2000 (OJ L 319, 16.12.2000)

²⁰ 1 EXU is the amount of enzyme which liberates 1 micromole of reducing sugars (xylose equivalents) from arabinoxylan per minute at pH 3.5 and 55°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

			Laying hens	-	2 400 EXU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 2 400- 7 400 EXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans) e.g. containing more than 30% wheat and 30% rye.</p>	01.04.2004 ¹
			Turkeys for fattening	-	2 400 EXU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 2 400- 5 600 EXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans) e.g. containing more than 30% wheat and 30% rye.</p>	01.04.2004 ¹

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

10	Alpha-amylase EC 3.2.1.1	Preparation of alpha-amylase produced by <i>Bacillus amyloliquefaciens</i> (CBS 360.94) having a minimum activity of: Solid form: 45 000 RAU ²¹ /g Liquid form: 20 000 RAU/ml	Piglets	4 months	1 800 RAU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 1 800 RAU.</p> <p>3. For use, exclusively, in compound feed destined for liquid feeding systems, and containing starch-rich feed materials (e.g. containing more than 35 % wheat).</p>	30.06.2004 ^f
			Pigs for fattening	-	1 800 RAU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 1 800 RAU.</p> <p>3. For use, exclusively, in compound feed destined for liquid feeding systems, and containing starch-rich feed materials (e.g. containing more than 35 % wheat).</p>	30.06.2004 ^f

²¹ 1 RAU is the amount of enzyme which converts 1 mg of soluble starch into a product having an equal absorption to a reference colour at 620 nm after reaction with iodine, per minute at pH 6.6 and 30°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

			Sows	-	1 800 RAU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 1 800 RAU.</p> <p>3. For use, exclusively, in compound feed destined for liquid feeding systems, and containing starch-rich feed materials (e.g. containing more than 35 % wheat).</p>	30.06.2004 ^f
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^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

11	Endo-1,4-beta-glucanase EC 3.2.1.4	Preparation of endo-1,4-beta-glucanase, endo-1,3(4)-beta-glucanase and endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (ATCC 74 252) having a minimum activity of : Liquid form : Endo-1,4-beta-glucanase: 8 000 U ²² / ml Endo-1,3(4)-beta-glucanase: 18 000 U ²³ / ml Endo-1,4-beta-xylanase : 26 000 U ²⁴ / ml	Chickens for fattening	-	endo-1,4-beta-glucanase: 400 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.	30.06.2004 ^f
	Endo-1,3(4)-beta-glucanase EC 3.2.1.6				endo-1,3(4)-beta-glucanase: 900 U			
	Endo-1,4-beta-xylanase EC 3.2.1.8				endo-1,4-beta-xylanase: 1 300 U		3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30% wheat or barley and more than 10 % rye.	
		Preparation of endo-1,4-beta-glucanase, endo-1,3(4)-beta-glucanase and endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (ATCC 74 252) having a minimum activity of : Granular form : Endo-1,4-beta-glucanase: 8 000 U ²⁵ /g Endo-1,3(4)-beta-glucanase: 18 000 U ²⁶ /g Endo-1,4-beta-xylanase : 26 000 U ²⁷ /g	Chickens for fattening	-	beta-glucanase: 400 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.	31.05.2005 ^f
					endo-1,3(4)-beta-glucanase: 900 U	-	2. Recommended dose per kilogram of complete feedingstuff: endo-1,4-beta-glucanase: 400-1 600 U endo-1,3(4)-beta-glucanase: 900-3 600 U endo-1,4-beta-xylanase: 1 300-5 200 U.	
					endo-1,4-beta-xylanase: 1 300 U	-	3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30% wheat or barley and more than 10 % rye	

²² 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from carboxymethylcellulose per minute at pH 5,0 and 40°C.

²³ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from barley beta-glucan per minute at pH 5,0 and 40°C.

²⁴ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from oat spelt xylan per minute at pH 5,0 and 40°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

²⁵ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from carboxymethylcellulose per minute at pH 5,0 and 40°C.

²⁶ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from barley beta-glucan per minute at pH 5,0 and 40°C.

²⁷ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from oat spelt xylan per minute at pH 5,0 and 40°C

^f First authorisation Commission Regulation (EC) N°937/2001 (OJ L 130, 12.5.2001, p. 25)

		Preparation of endo-1,4-beta-glucanase, endo-1,3(4)-beta-glucanase and endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (ATCC 74 252) having a minimum activity of : Liquid and granular form : Endo-1,4-beta-glucanase: 8 000 U ²⁸ / ml or g Endo-1,3(4)-beta-glucanase: 18 000 U ²⁹ / ml or g Endo-1,4-beta-xylanase : 26 000 U ³⁰ / ml or g	Turkeys for fattening	-	endo-1,4-beta-glucanase: 400 U endo-1,3(4)-beta-glucanase: 900 U endo-1,4-beta-xylanase: 1 300 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dosages per kilogram of complete feedingstuff: endo-1,4-beta-glucanase: 400 – 800 U endo-1,3(4)-beta-glucanase: 900 – 1 800 U endo-1,4-beta-xylanase: 1 300 – 2 600 U 3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 40 % wheat	31.05.2005 ^f
12	Endo-1,4-beta-glucanase EC 3.2.1.4 Endo-1,3(4)-beta-glucanase EC 3.2.1.6 Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-glucanase, endo-1,3(4)-beta-glucanase and endo-1,4-beta-xylanase produced by <i>Trichoderma viride</i> (FERM BP-4447) having a minimum activity of: Endo-1,4-beta-glucanase: 8 000 U ³¹ /g Endo-1,3(4)-beta-glucanase: 18 000 U ³² /g Endo-1,4-beta-xylanase: 26 000 U ³³ /g	Chickens for fattening	-	endo-1,4-beta-glucanase: 200 U endo-1,3(4)-beta-glucanase: 450 U endo-1,4-beta-xylanase: 650 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: endo-1,4- beta-glucanase: 800-1200 U endo-1,3(4)-beta-glucanase: 1 800-2 700 U endo-1,4-beta-xylanase: 2 600-3 900 U. 3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 20% wheat and 20% barley, and/or 25 % rye.	30.06.2004 ^f

²⁸ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from carboxymethylcellulose per minute at pH 5,0 and 40°C.

²⁹ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from barley beta-glucan per minute at pH 5,0 and 40°C.

³⁰ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from oat spelt xylan per minute at pH 5,0 and 40°C

^f First authorisation Commission Regulation (EC) N°937/2001 (OJ L 130, 12.5.2001, p. 25)

³¹ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from carboxymethylcellulose per minute at pH 5,0 and 40°C

³² 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from barley beta-glucan per minute at pH 5,0 and 40°C

³³ 1 U is the amount of enzyme which liberates 0,1 micromoles of glucose from oat spelt xylan per minute at pH 5,0 and 40°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

			Laying hens	-	<p>endo-1,4-beta-glucanase: 640 U</p> <p>endo-1,3(4)-beta-glucanase: 1440 U</p> <p>endo-1,4-beta-xylanase: 2080 U</p>	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: endo-1,4-beta-glucanase : 640-1 280 U endo-1,3(4)-beta-glucanase : 1 440-2 880 U endo-1,4-beta-xylanase : 2 080-4 160 U.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 20% wheat and 20% barley and/or 25 % rye.</p>	30.06.2004 ^f
			Turkeys for fattening	-	<p>endo-1,4-beta-glucanase: 800 U</p> <p>endo-1,3(4)-beta-glucanase: 1800 U</p> <p>endo-1,4-beta-xylanase: 2600 U</p>	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: endo-1,4-beta-glucanase: 800-1200 U endo-1,3(4)-beta-glucanase: 1800-2700 U endo-1,4-beta-xylanase: 2600-3900 U.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 20% wheat and 20 % barley.</p>	30.06.2004 ^f

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

13	<p>Endo-1,3(4)-beta-glucanase EC 3.2.1.6</p> <p>Endo-1,4-beta-xylanase EC 3.2.1.8</p>	<p>Preparation of endo-1,3(4)-beta-glucanase and endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (CBS 357.94) having a minimum activity of:</p> <p>Powder form: 8 000 BGU³⁴/g 11 000 EXU³⁵/g</p> <p>Granulated form: 6 000 BGU/g 8 250 EXU/g</p> <p>Liquid form: 2 000 BGU/ml 2 750 EXU/ml</p>	Chickens for fattening	-	100 BGU 130 EXU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 100 BGU 130 EXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 30% wheat and 30% barley, or 20% rye.</p>	30.06.2004 ^f
			Laying hens	-	600 BGU 800 EXU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 600 BGU 800 EXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 40% wheat and more than 30% barley.</p>	01.04.2004 ^l

³⁴ 1 BGU is the amount of enzyme which liberates 0.278 micromoles of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 3.5 and 40°C

³⁵ 1 EXU is the amount of enzyme which liberates 1 micromole of reducing sugars (xylose equivalents) from wheat arabinoxylan per minute at pH 3.5 and 55°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^l First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

			Turkeys for fattening	-	600 BGU 800 EXU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 600 BGU 800 EXU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30% wheat or more than 30% rye.</p>	01.04.2004 ¹
14	Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-xylanase produced by <i>Aspergillus niger</i> (CBS 520.94) having a minimum activity of: Solid form: Endo-1,4-beta-xylanase: 600 U ³⁶ /g Liquid form: Endo-1,4-beta-xylanase 300 U/ml	Chickens for fattening	-	endo-1,4-beta-xylanase :300 U	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram complete feedingstuff : endo-1,4-beta-xylanase : 300-600 U.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 50% wheat.</p>	30.06.2004 ^f

¹ First authorisation Commission Regulation (EC) N° 654/2000 (OJ L 79, 30.3.2000, p. 26)

³⁶ 1 U is the amount of enzyme which liberates 1 micromole of xylose from birchwood xylan per minute at pH 5.3 and 50°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

15	Endo-1,3(4)-beta-glucanase EC 3.2.1.6	Preparation of endo-1,3(4)-beta-glucanase produced by <i>Trichoderma viride</i> (CBS 517.94) having a minimum activity of: Solid form: Endo-1,3(4)-beta-glucanase : 650 U ³⁷ /g Liquid form: Endo-1,3(4)-beta-glucanase : 325 U/ml	Chickens for fattening	-	endo-1,3(4)-beta-glucanase : 325 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: endo-1,3(4)-beta-glucanase : 325-650 U. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 50% barley.	30.06.2004 ^f
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³⁷ 1 U is the amount of enzyme which liberates 1 micromole of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 5.0 and 30°C
^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

16	Endo-1,4-beta-glucanase EC 3.2.1.4	Preparation of endo-1,4-beta-glucanase produced by <i>Trichoderma longibrachiatum</i> (IMI SD 142) having a minimum activity of: Liquid form: 2000 CU ³⁸ /ml	Chickens for fattening	-	250 CU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 500- 1000 CU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley.</p>	30.06.2004 ^f
			Laying hens	-	250 CU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 500- 1000 CU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley.</p>	30.06.2004 ^f

³⁸ 1 CU is the amount of enzyme which liberates 0.128 micromoles of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 4.5 and 30°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

			Piglets	4 months	250 CU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 500- 1000 CU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley.</p>	30.06.2004 ^f
			Pigs for fattening	-	250 CU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 500- 1000 CU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley.</p>	30.06.2004 ^f

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

		Preparation of endo-1,4-beta-glucanase produced by <i>Trichoderma longibrachiatum</i> (IMI SD 142) having a minimum activity of: Solid form: 2000 CU ³⁹ /g	Chickens for fattening	-	250 CU	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting. 2. Recommended dose per kg of complete feedingstuff: 500- 1000 CU. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley.	17.07.2004 ^m
			Laying hens	-	250 CU	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting. 2. Recommended dose per kg of complete feedingstuff: 500- 1000 CU. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley.	17.07.2004 ^m
			Piglets	4 months	250 CU	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting. 2. Recommended dose per kg of complete feedingstuff: 500- 1000 CU. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley.	17.07.2004 ^m

³⁹ 1 CU is the amount of enzyme which liberates 0.128 micromoles of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 4.5 and 30°C

^m First authorisation Commission Regulation (EC) N° 1353/2000 (OJ L 155, 28.6.2000, p. 15)

^m First authorisation Commission Regulation (EC) N° 1353/2000 (OJ L 155, 28.6.2000, p. 15)

^m First authorisation Commission Regulation (EC) N° 1353/2000 (OJ L 155, 28.6.2000, p. 15)

			Pigs for fattening	-	250 CU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 500- 1000 CU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley.</p>	17.07.2004 ^m
17	Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (IMI SD 135) having a minimum activity of: Liquid form: 6000 EPU ⁴⁰ /ml	Chickens for fattening	-	750 EPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 1500- 3000 EPU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.</p>	30.06.2004 ^f

^m First authorisation Commission Regulation (EC) N° 1353/2000 (OJ L 155, 28.6.2000, p. 15)

⁴⁰ 1 EPU is the amount of enzyme which liberates 0.0083 micromoles of reducing sugars (xylose equivalents) from oat spelt xylan per minute at pH 4.7 and 30°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

			Laying hens	-	750 EPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 1500- 3000 EPU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.</p>	30.06.2004 ^f
			Piglets	4 months	750 EPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 1500- 3000 EPU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.</p>	30.06.2004 ^f
			Pigs for fattening	-	750 EPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 1500- 3000 EPU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.</p>	30.06.2004 ^f

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

		Preparation of endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (IMI SD 135) having a minimum activity of: Solid form: 6000 EPU ⁴¹ /g	Chickens for fattening	-	750 EPU	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting. 2. Recommended dose per kg of complete feedingstuff: 1500- 3000 EPU. 3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.	17.07.2004 ^m
			Laying hens	-	750 EPU	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting. 2. Recommended dose per kg of complete feedingstuff: 1500- 3000 EPU. 3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.	17.07.2004 ^m

⁴¹ 1 EPU is the amount of enzyme which liberates 0.0083 micromoles of reducing sugars (xylose equivalents) from oat spelt xylan per minute at pH 4.7 and 30°C

^m First authorisation Commission Regulation (EC) N°1353/2000 (OJ L 155, 28.6.2000, p. 15)

ⁿ First authorisation Commission Regulation (EC) N°1353/2000 (OJ L 155, 28.6.2000, p. 15)

			Piglets	4 months	750 EPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 1500- 3000 EPU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.</p>	17.07.2004 ^m
			Pigs for fattening	-	750 EPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 1500- 3000 EPU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.</p>	17.07.2004 ^m
			Turkeys for fattening	-	750 EPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 1500-3000 EPU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 35% wheat.</p>	17.07.2004 ^m

^m First authorisation Commission Regulation (EC) N°1353/2000 (OJ L 155, 28.6.2000, p. 15)

^m First authorisation Commission Regulation (EC) N°1353/2000 (OJ L 155, 28.6.2000, p. 15)

^m First authorisation Commission Regulation (EC) N°1353/2000 (OJ L 155, 28.6.2000, p. 15)

18	Endo-1,3(4)-beta-glucanase EC 3.2.1.6	Preparation of endo-1,3(4)-beta-glucanase produced by <i>Aspergillus niger</i> (MUCL 39199) having a minimum activity of: Solid form: 2 000 AGL ⁴² /g Liquid form: 500 AGL/ml	Chickens for fattening	-	100 AGL	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 100 AGL. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley and 20% wheat.	30.06.2004 ^f
19	Endo-1,3(4)-beta-glucanase EC 3.2.1.6	Preparation of endo-1,3(4)-beta-glucanase produced by <i>Aspergillus niger</i> (MUCL 39199) having a minimum activity of: Solid form: 1 500 AGL ⁴³ /g Liquid form: 200 AGL/g	Chickens for fattening	-	25 AGL	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 25-100 AGL. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 50% barley.	30.06.2004 ^f

⁴² 1 AGL is the amount of enzyme which liberates 5.55 micromoles of reducing sugars (maltose equivalents) from barley beta-glucan per minute at pH 4.6 and 30°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

⁴³ 1 AGL is the amount of enzyme which liberates 5.55 micromoles of reducing sugars (maltose equivalents) from barley beta-glucan per minute at pH 4.6 and 30°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

20	Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (MUCL 39203) having a minimum activity of: Solid form: 2 000 AXC ⁴⁴ /g Liquid form: 500 AXC/ml	Chickens for fattening	-	100 AXC	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 100 AXC. 3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat or rye.	30.06.2004 ^f
21	Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (MUCL 39203) having a minimum activity of: Solid form: 1 500 AXC ⁴⁵ /g Liquid form: 200 AXC/g	Chickens for fattening	-	25 AXC	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 25-100 AXC. 3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 50% wheat.	30.06.2004 ^f
22	Endo-1,3(4)-beta-glucanase EC 3.2.1.6	Preparation of endo-1,3(4)-beta-glucanase produced by <i>Trichoderma longibrachiatum</i> (CNCM MA 6-10 W) having a minimum activity of: Solid form: 70 000 BGN ⁴⁶ /g Liquid form: 14 000 BGN/ml	Chickens for fattening	-	1 050 BGN	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 2 800 BGN. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 50% barley.	30.06.2004 ^f

⁴⁴ 1 AXC is the amount of enzyme which liberates 17.2 micromoles of reducing sugars (maltose equivalents) from oat xylan per minute at pH 4.7 and 30°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

⁴⁵ 1 AXC is the amount of enzyme which liberates 17.2 micromoles of reducing sugars (maltose equivalents) from oat xylan per minute at pH 4.7 and 30°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

⁴⁶ 1 BGN is the amount of enzyme which liberates 1 micromole of reducing sugar (glucose equivalents) from barley beta-glucan per minute at pH 4.8 and 50°C.

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

23	Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (CNCM MA 6-10 W) having a minimum activity of: Solid form: 70 000 IFP ⁴⁷ /g Liquid form: 7 000 IFP/ml	Chickens for fattening	-	1 050 IFP	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 1 400 IFP.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 56% wheat.</p>	30.06.2004 ^f
			Turkeys for fattening	-	700 IFP	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 1 400 IFP.</p> <p>3. For use in compound feed rich in non- starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.</p>	28.02.2005 ^g
			Laying hens	-	840 IFP	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 840 IFP.</p> <p>3. For use in compound feed rich in non- starch polysaccharides (mainly arabinoxylans), e.g. containing more than 40% wheat.</p>	28.02.2005 ^g

⁴⁷ 1 IFP is the amount of enzyme which liberates 1 micromole of reducing sugars (xylose equivalents) from oat xylan per minute at pH 4.8 and 50°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^g First authorisation Commission Regulation (EC) N° 418/2001 (OJ L 62, 2.3.2001, p. 3)

^h First authorisation Commission Regulation (EC) N° 418/2001 (OJ L 62, 2.3.2001, p. 3)

24	<p>Endo-1,4-beta-xylanase EC 3.2.1.8</p> <p>Endo-1,3(4)-beta-glucanase EC 3.2.1.6</p>	<p>Preparation of endo-1,4-beta-xylanase and endo-1,3(4)-beta-glucanase produced by <i>Aspergillus niger</i> (CNCM I-1517) having a minimum activity of:</p> <p>28 000 QXU⁴⁸/g</p> <p>140 000 QGU⁴⁹/g</p>	Chickens for fattening	-	<p>420 QXU</p> <p>2 100 QGU</p>	<p>1 120 QXU</p> <p>5 600 QGU</p>	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 560 QXU 2 800 QGU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 30% wheat and 30% barley.</p>	30.06.2004 ^f
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⁴⁸ 1 QXU is the amount of enzyme which liberates 1 micromole of reducing sugars (xylose equivalents) from oat xylan per minute at pH 5.1 and 50°C

⁴⁹ 1 QGU is the amount of enzyme which liberates 1 micromole of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 4.8 and 50°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

25	Endo-1,3(4)-beta-glucanase EC 3.2.1.6 Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,3(4)-beta-glucanase and endo-1,4-beta-xylanase produced by <i>Aspergillus niger</i> (NRRL 25541) having a minimum activity of: Endo-1,3(4)-beta-glucanase: 1100 U ⁵⁰ /g Endo-1,4-beta-xylanase: 1600 U ⁵¹ /g	Chickens for fattening	-	endo-1,3(4)-beta-glucanase: 138 U endo-1,4-beta-xylanase: 200 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: endo-1,3(4)-beta-glucanase: 138 U endo-1,4-beta-xylanase: 200 U. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 50% barley or 30% wheat and 30% maize.	30.06.2004 ^f
			Laying hens	-	endo-1,3 (4)-beta-glucanase: 138 U endo-1,4-beta-xylanase: 200 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: endo-1,3(4)-beta-glucanase: 138 U endo-1,4-beta-xylanase: 200 U. 3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and beta-glucans), e.g. containing more than 50% barley or 30% wheat and 30% maize.	30.06.2004 ^f

⁵⁰ 1 U is the amount of enzyme which liberates 1 micromole of reducing sugars (glucose equivalents) from oat beta-glucan per minute at pH 4.0 and 30°C

⁵¹ 1 U is the amount of enzyme which liberates 1 micromole of reducing sugars (glucose equivalents) from oat xylan per minute at pH 4.0 and 30°C

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

^f First authorisation Commission Regulation (EC) N° 1436/98 (OJ L 191, 7.7.1998, p. 15)

26	Endo-1,3(4)-beta-glucanase EC 3.2.1.6	Preparation of endo-1,3(4)-beta-glucanase produced by <i>Trichoderma reesei</i> (CBS 526.94) having a minimum activity of : Solid form : 350 000 BU ⁵² /g Liquid form : 50 000 BU/g	Chickens for fattening	-	23 000 BU	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 23 000-50 000 BU. 3. For use in compound feed rich in non-starch polysaccharides (mainly glucans), e.g. containing more than 20% barley or 30 % rye.	30.06.2004 ⁱ
			Piglets	4 months	26 000 BU	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 26 000-35 000 BU. 3. For use in compound feed rich in non-starch polysaccharides (mainly glucans), e.g. containing more than 60% barley or wheat.	30.06.2004 ⁱ

⁵² 1 BU is the amount of enzyme which liberates 0.06 micromoles of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 4.8 and 50°C.

ⁱ First authorisation Commission Regulation (EC) N° 2374/98 (OJ L 295, 4.11.1998, p. 3.)

ⁱ First authorisation Commission Regulation (EC) N° 2374/98 (OJ L 295, 4.11.1998, p. 3.)

27	Endo-1,4-beta-xylanase EC 3.2.1.8 Endo-1,3(4)-beta-glucanase EC 3.2.1.6	Preparation of endo-1,4-beta-xylanase produced by <i>Trichoderma reesei</i> (CBS 529.94) and endo-1,3(4)-beta-glucanase produced by <i>Trichoderma reesei</i> (CBS 526.94) having minimum activities of : Solid form : 200 000 BXU ⁵³ /g 200 000 BU ⁵⁴ /g Liquid form : 30 000 BXU/g 30 000 BU/g	Chickens for fattening	-	2 500 BXU 2 500 BU	- -	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 10 000 BXU 10 000 BU. 3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans and glucans), e.g. containing more than 40% wheat or 30% rye.	30.06.2004 ¹
			Piglets	2 months	7 500 BXU 7 500 BU	- -	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kilogram of complete feedingstuff: 7 500- 15 000 BXU 7 500- 15 000 BU. 3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 50% wheat.	28.02.2005 ¹

⁵³ 1 BXU is the amount of enzyme which liberates 0.06 micromoles of reducing sugars (xylose equivalents) from birch xylan per minute at pH 5.3 and 50 °C

⁵⁴ 1 BU is the amount of enzyme which liberates 0.06 micromoles of reducing sugars (glucose equivalents) from barley beta-glucan per minute at pH 4.8 and 50 °C.

¹ First authorisation Commission Regulation (EC) N° 2374/98 (OJ L 295, 4.11.1998, p. 3.)

⁴ First authorisation Commission Regulation (EC) N° 418/2001 (OJ L 62, 2.3.2001, p. 3)

28	3-Phytase EC 3.1.3.8	Preparation of 3-phytase produced by <i>Trichoderma reesei</i> (CBS 528.94) having a minimum activity of: Solid form: 5 000 PPU ⁵⁵ /g Liquid form: 1 000 PPU/g	Piglets	4 months	250 PPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 500-750 PPU.</p> <p>3. For use in compound feed rich in phytates, e.g. containing more than 50% cereals (maize, barley, wheat), tapioca, oilseeds and pulses.</p>	30.06.2004 ⁱ
			Pigs for fattening	-	500 PPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 500-750 PPU.</p> <p>3. For use in compound feed rich in phytates, e.g. containing more than 50% cereals (maize, barley, wheat), tapioca, oilseeds and pulses.</p>	30.06.2004 ⁱ
			Chickens for fattening	-	500 PPU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: 500-750 PPU.</p> <p>3. For use in compound feed containing more than 0,22% phytin bound phosphorus.</p>	28.02.2005 ⁱⁱ

⁵⁵ 1 PPU is the amount of enzyme which liberates 1 micromole of inorganic phosphate from sodium phytate per minute at pH 5 and 37 °C.

ⁱ First authorisation Commission Regulation (EC) N° 2374/98 (OJ L 295, 4.11.1998, p. 3.)

ⁱⁱ First authorisation Commission Regulation (EC) N° 2374/98 (OJ L 295, 4.11.1998, p. 3.)

ⁱⁱⁱ First authorisation Commission Regulation (EC) N° 418/2001 (OJ L 62, 2.3.2001, p. 3)

29	Endo-1,3(4)-beta-glucanase EC 3.2.1.6	Preparation of endo-1,3(4)-beta-glucanase produced by <i>Geosmithia emersonii</i> (IMI SD 133) having a minimum activity of: Endo-1,3(4)-beta-glucanase : 5500 U ⁵⁶ /g	Chickens for fattening	-	endo-1,3(4)-beta-glucanase : 250 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kg of complete feedingstuff: endo-1,3(4)-beta-glucanase : 250 U. 3. For use in compound feed rich in non-starch polysaccharides, (mainly beta-glucans), e.g. containing more than 50% barley.	30.06.2004 ^g
30	Endo-1,3(4)-beta-glucanase EC 3.2.1.6 Endo-1,4-beta-xylanase EC 3.2.1.8	Preparation of endo-1,3(4)-beta-glucanase and endo-1,4-beta-xylanase produced by <i>Penicillium funiculosum</i> (IMI SD 101) having a minimum activity of: Powder form : Endo-1,3(4)-beta-glucanase: 2000 U ⁵⁷ /g Endo-1,4-beta-xylanase: 1400 U ⁵⁸ /g Liquid form : Endo-1,3(4)-beta-glucanase: 500 U/ml Endo-1,4-beta-xylanase: 350 U/ml	Chickens for fattening	-	endo-1,3(4)-beta-glucanase: 100 U endo-1,4-beta-xylanase: 70 U	-	1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting. 2. Recommended dose per kg of complete feedingstuff: endo-1,3(4)-beta-glucanase: 100 U endo-1,4-beta-xylanase: 70 U. 3. For use in compound feed rich in non-starch polysaccharides, (mainly beta-glucans and arabinoxylans), e.g. containing more than 50% barley or 60% wheat.	30.06.2004 ^g

⁵⁶ 1 U is the amount of enzyme which liberates 2,78 micromoles of reducing sugars (maltose equivalents) from barley beta-glucan per minute at pH 5,0 and 50 °C.

^g First authorisation Commission Regulation (EC) N°866/1999 (OJ L 108, 27.4.1999, p. 21)

⁵⁷ 1 U is the amount of enzyme which liberates 5,55 micromoles of reducing sugars (maltose equivalents) from barley beta-glucan per minute at pH 5,0 and 50°C

⁵⁸ 1 U is the amount of enzyme which liberates 4,00 micromoles of reducing sugars (maltose equivalents) from birchwood xylan per minute at pH 5,5 and 50 °C

^g First authorisation Commission Regulation (EC) N°866/1999 (OJ L 108, 27.4.1999, p. 21)

			Turkeys for fattening	-	endo-1,3(4)-beta-glucanase: 100 U endo-1,4-beta-xylanase: 70 U	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: endo-1,3(4)-beta-glucanase: 100 U endo-1,4-beta-xylanase: 70 U.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 50% wheat.</p>	28.02.2005 ⁴
			Laying hens	-	endo-1,3(4)-beta-glucanase: 100 U endo-1,4-beta-xylanase: 70 U	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: endo-1,3(4)-beta-glucanase: 100 U endo-1,4-beta-xylanase: 70 U.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 60% barley or 30% wheat.</p>	28.02.2005 ⁴

⁴ First authorisation Commission Regulation (EC) N° 418/2001 (OJ L 62, 2.3.2001, p. 3)

⁴ First authorisation Commission Regulation (EC) N° 418/2001 (OJ L 62, 2.3.2001, p. 3)

			Pigs for fattening	-	endo-1,3(4)-beta-glucanase: 100 U endo-1,4-beta-xylanase: 70 U	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life, and stability to pelleting.</p> <p>2. Recommended dose per kilogram of complete feedingstuff: endo-1,3(4)-beta-glucanase: 100 U endo-1,4-beta-xylanase: 70 U.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly beta-glucans and arabinoxylans), e.g. containing more than 50% barley or 60% wheat.</p>	28.02.2005 ⁴
31	Endo-1,4-beta xylanase EC 3.2.1.8	Preparation of endo-1,4-beta-xylanase produced by <i>Trichoderma longibrachiatum</i> (CBS 614.94) having a minimum activity of : Solid form : 300 EU ⁵⁹ /g Liquid form: 1 000 EU/g	Chickens for fattening	-	600 EU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 600 EU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 60 % wheat.</p>	30.06.2004 ⁶
			Laying hens	-	300 EU	-	<p>1. In the directions for use of the additive and premixture, indicate the storage temperature, storage life and stability to pelleting.</p> <p>2. Recommended dose per kg of complete feedingstuff: 600 EU.</p> <p>3. For use in compound feed rich in non-starch polysaccharides (mainly arabinoxylans), e.g. containing more than 60 % wheat.</p>	30.06.2004 ⁶

⁴ First authorisation Commission Regulation (EC) N° 418/2001 (OJ L 62, 2.3.2001, p. 3)

⁵⁹ 1 EU is the amount of enzyme which liberates 1 micromole of reducing sugars (xylose equivalents) from oat xylan per minute at pH 4,5 and 40°C

⁶ First authorisation Commission Regulation (EC) N°866/1999 (OJ L 108, 27.4.1999, p. 21)

⁶ First authorisation Commission Regulation (EC) N°866/1999 (OJ L 108, 27.4.1999, p. 21)