

1. Animals used by species¹

Table 1: In total animals used by species

Animal Species	Number of Animals	%
Mice	2.005.097	72,83%
Rats	320.629	11,65%
Guinea-Pigs	18.523	0,67%
Hamsters (Syrian)	1.403	0,05%
Hamsters (Chinese)	30	0,00%
Mongolian gerbil	4.883	0,18%
Other Rodents	13.343	0,48%
Rabbits	107.652	3,91%
Cats	502	0,02%
Dogs	2.437	0,09%
Ferrets	207	0,01%
Other carnivores	686	0,02%
Horses, donkeys & cross-breeds	1.252	0,05%
Pigs	12.279	0,45%
Goats	942	0,03%
Sheep	1.719	0,06%
Cattle	3.762	0,14%
Prosimians	78	0,00%
Marmoset and tamarins	234	0,01%
Cynomolgus monkey	2.075	0,08%
Rhesus monkey	31	0,00%
Baboons	6	0,00%
Other Mammals	1.523	0,06%
Domestic fowl	29.703	1,08%
Other birds	13.970	0,51%
Reptiles	453	0,02%
Rana	143	0,01%
Xenopus	6.943	0,25%
Other Amphibians	3305	0,12%
Zebra fish	118.423	4,30%
Other Fish	80.749	2,93%
Cephalopods	80	0,00%
Total	2.753.062	100%

¹ Excludes re-use

Figure 1: Animals used by species groups

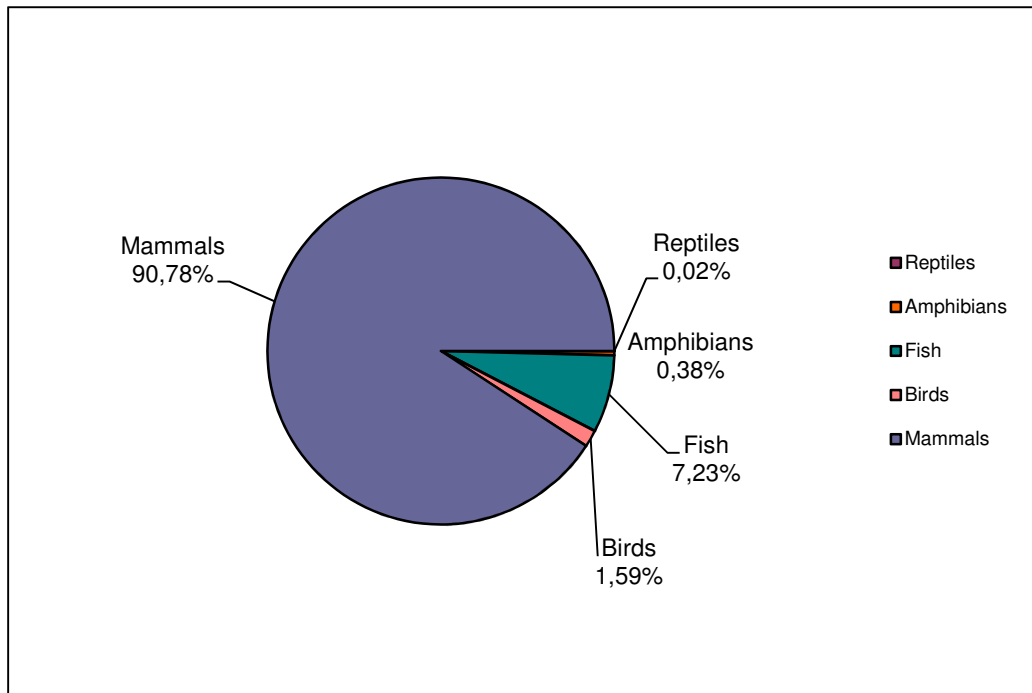


Table 2: Animals used by species groups

Species grouping Level 1	Number of Animals
Warm-blooded vertebrates	2.542.966
Cold-blooded vertebrates	210.016
Invertebrates	80
Total	2.753.062

Mammals	Number of Animals
Rodents	2.363.908
Rabbits	107.652
Carnivores	3.832
Equidae	1.252
Artiodactyla	18.702
Non-human primates	2.424
Other mammals	1.523
Total	2.499.293

Species grouping Level 2	Number of Animals
Mammals	2499293
Birds	43673
Fish	199172
Amphibians	10391
Reptiles	453
Cephalopods	80
Total	2.753.062

Non-human primates	Number of Animals
Prosimians	78
New World Monkeys	234
Old World Monkeys	2112
Total	2.424

2. Origin of used Animals²

Table 3: Origin of used animals in total

	Animals born in				Total
	the EU at a registered breeder	the EU but not at a registered breeder	rest of Europe	rest of the world	
Mice	1.950.849	45.795	318	8.135	2.005.097
Rats	315.442	2.370	55	2.762	320.629
Guinea-Pigs	18.406	117			18.523
Hamsters (Syrian)	1.403				1.403
Hamsters (Chinese)	30				30
Mongolian gerbil	4.525	290		68	4.883
Other Rodents	911	12.432			13.343
Rabbits	106.486	300		866	107.652
Cats	215	97		190	502
Dogs	389	789		1.259	2.437
Ferrets	145	24		38	207
Other carnivores	413	269	4		686
Horses, donkeys & cross-breeds	304	948			1.252
Pigs	9.131	3.148			12.279
Goats	61	881			942
Sheep	759	960			1.719
Cattle	1.959	1.803			3.762
Prosimians	78				78
Marmoset and tamarins	234				234

² Excludes re-use

Cynomolgus monkey	94			1.981	2.075
Rhesus monkey	31			0	31
Baboons	6				6
Other Mammals	300	1.195		28	1.523
Domestic fowl	24.167	5.536			29.703
Other birds	6.837	6.731	99	303	13.970
Reptiles	7	218		228	453
Rana	10	133			143
Xenopus	5.245	50		1.648	6.943
Other Amphibians	1.437	1629		239	3.305
Zebra fish	104.093	14.330			118.423
Other Fish	53.388	14.950	11.243	1.168	80.749
Cephalopods		48	32		80
Total	2.607.355	115.043	11.751	18.913	2.753.062

Table 4 – 6: Origin of used animals by species groups

	Animals born in the EU at a registered breeder	Animals born in the EU but not at a registered breeder	Animals born in rest of Europe	Animals born in rest of the world	Total
Warm-blooded vertebrates	2.443.175	83.685	476	15.630	2.542.966
Cold-blooded vertebrates	164.180	31.310	11.243	3.283	210.016
Invertebrates		48	32		80
Total	2.607.355	115.043	11.751	18.913	2.753.062

	Animals born in the EU at a registered breeder	Animals born in the EU but not at a registered breeder	Animals born in rest of Europe	Animals born in rest of the world	Total
Mammals	2.412.171	71.418	377	15.327	2.499.293
Birds	31.004	12.267	99	303	43.673
Fish	157.481	29.280	11.243	1.168	199.172
Amphibians	6.692	1.812		1.887	10.391
Reptiles	7	218		228	453
Cephalopods		48	32		80
Total	2.607.355	115.043	11.751	18.913	2.753.062

	Animals born in the EU at a registered breeder	Animals born in the EU but not at a registered breeder	Animals born in rest of Europe	Animals born in rest of the world	Total
Rodents	2.291.566	61.004	373	10.965	2.363.908
Rabbits	106.486	300		866	107.652
Carnivores	1.162	1.179	4	1.487	3.832
Equidae	304	948			1.252
Artiodactyla	11.910	6.792			18.702
Non-human primates	443			1.981	2.424
Other mammals	300	1.195		28	1.523
Total	2.412.171	71.418	377	15.327	2.499.293

3. Non-Human Primates by source and generation³

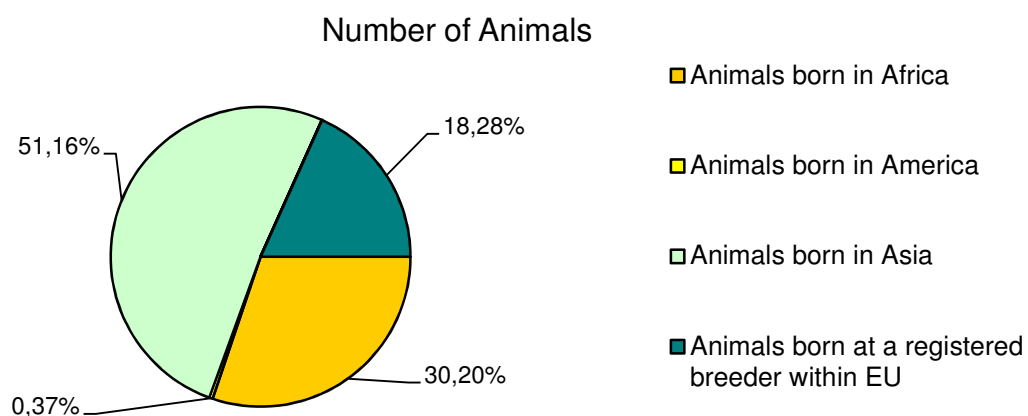
Table 7: Generation of non-human primates

NHP Generation	Number of Animals
F0	0
F1	508
F2 or greater	1.215
Self-sustaining colony	701
Total	2.424

Table 8: Origin of non-human primates

NHP Source (origin)	Number of Animals
Animals born at a registered breeder within EU	443
Animals born in rest of Europe	0
Animals born in Asia	1.240
Animals born in America	9
Animals born in Africa	732
Animals born elsewhere	0
Total:	2.424

Figure 2: Origin of non-human primates (%)



³ Excludes re-use

4. Use of species in procedures by purposes

Table 9: Use of species in procedures by purposes

	Basic Research	Translational and applied research	Regulatory use and Routine production	Protection of the natural environment in the interests of the health or welfare of human beings or animals	Preservation of species	Higher education or training for the acquisition, maintenance or improvement of vocational skills	Forensic enquiries	Maintenance of colonies of established genetically altered animals, not used in other procedures	Total
Mice	1.373.326	293.804	271.845	74	6.906	33.871	4	51.508	2.031.338
Rats	88.488	52.107	171.861		138	12.569	23	1.047	326.233
Guinea-Pigs	916	3.517	13.935			440	1		18.809
Hamsters (Syrian)	19	660	646			84			1.409
Hamsters (Chinese)			30						30
Mongolian gerbil	1.544	1.713	1.713			288			5.258
Other Rodents	2.973	1.836	8.258	149		182			13.398
Rabbits	1.774	1.182	108.471			291			111.718
Cats	111	296	663			42			1.112
Dogs	433	1.022	2.880	6		150			4.491
Ferrets	55	182							237
Other carnivores	187	2	497						686
Horses, donkeys & cross-breeds	1.255	158	23			89			1.525
Pigs	3.211	4.233	3.885	52		1.831	1		13.213
Goats	70	757	55			71			953
Sheep	339	1.413	276			299			2.327

Cattle	1.341	1.525	1.042			242			4.150
Prosimians	102								102
Marmoset and tamarins	135	3	160			6			304
Cynomolgus monkey	65	169	2.447			2			2.683
Rhesus monkey	27	13				5			45
Baboons		6							102
Other species of Old World Monkeys		1							304
Other Mammals	932	156	155	115	19	213			1.590
Domestic fowl	8.486	8.123	11.912		816	537			29.874
Other birds	8.444	4.023	1.459		141	219	11		14.297
Reptiles	406		300	43		8			757
Rana		1	132			10			143
Xenopus	7.596	90				546			8.232
Other Amphibians	2.258	18	60	951		18			3.305
Zebra fish	99.437	1.285	16.967	954		1.535		700	120.878
Other Fish	39.297	3.155	10.583	3.667	21.778	2.297			80.777
Cephalopods	32					48			80
Total	1.643.259	381.450	630.255	6.011	29.798	55.893	40	53255	2.799.961

Figure 3: Use of animals in procedures by purposes

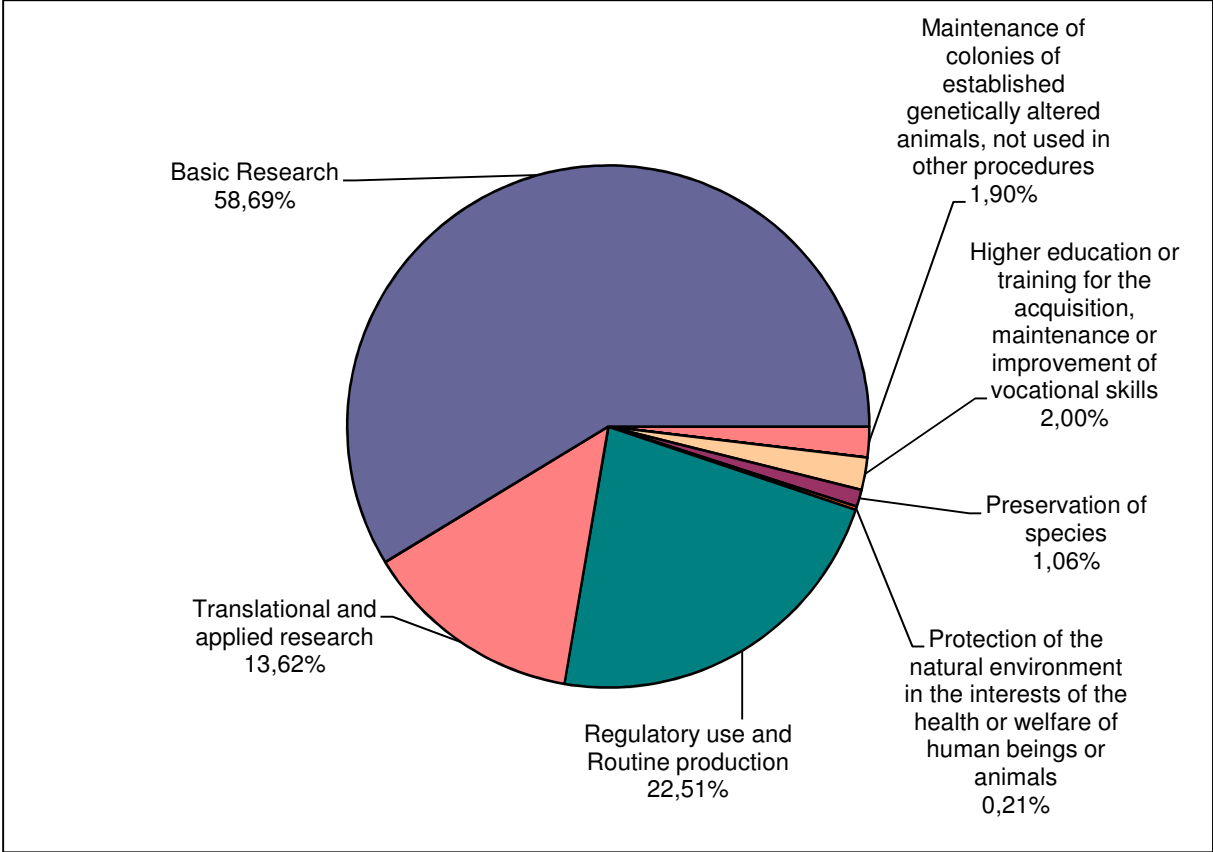


Table 10: Use of species in basic research purposes

	Oncology	Cardio-vascular Blood and Lymphatic System	Nervous System	Respiratory System	Gastrointestinal System including Liver	Musculoskeletal System	Immune System	Urogenital/ Reproductive System	Sensory Organs (skin, eyes and ears)	Endocrine System/ Metabolism	Multisystemic	Ethology / Animal Behaviour /Animal Biology	Other basic research	Total
Mice	103.410	129.750	259.571	40.040	43.849	16.343	381.913	23.526	40.705	62.332	105.184	2.194	164.509	1.373.326
Rats	952	23.635	40.074	2.668	3.085	1.835	5.875	1.470	1.677	1.699	1.393	227	3.898	88.488
Guinea-Pigs	72	48	29	31	204		143		340			35	14	916
Hamsters (Syrian)			19											19
Hamsters (Chinese)														
Mongolian gerbil			1.179		49		74		242				0	1.544
Other Rodents	103		275		7			20	9	207	5	2.347	0	2.973
Rabbits	51	499	30	37	22	76	6	144	105	189	148	5	462	1.774
Cats			7					14	44	30			16	111
Dogs		18	142		2	143	2	8	35	9	74			433
Ferrets			53	2										55
Other carnivores								4				173	10	187
Horses, donkeys & cross-breeds				31	88	96	17	80	621	86	25	4	207	1.255
Pigs	74	321	89	113	249	57	416	20	2	344	114	462	950	3.211
Goats											5	59	6	70
Sheep		19	33		32	129	33				21	28	44	339

Cattle		6	2		108		166	456		297	225	47	34	1.341
Prosimians			41									61		102
Marmoset and tamarins			22	42				54			17			135
Cynomolgus monkey														65
Rhesus monkey														27
Other Mammals			79			6	97	17	9	14	2	567	141	932
Domestic fowl			605		643	120	1.124	2	117	223	4	50	5.598	8.486
Other birds		35	174		255	5	1.133	30	10			6.736	66	8.444
Reptiles			362	30								14		406
Xenopus	100	91	3.363	50	28	44		186	89	542	393	245	2.465	7.596
Other Amphibians		200	206			433		0				570	849	2.258
Zebra fish	1.527	28.779	24.829		380	10.121	3.582	4.068	4.844	10.687	2.557	836	7.227	99.437
Other Fish	3.935		933	3			1.328	1.456	3.030	134	2.399	19.246	6.833	39.297
											32			32
Total	110.224	183.401	332.203	43.053	49.001	29.408	395.909	31.555	51.879	76.793	112.598	33.906	193.329	1.643.259
%	6,71%	11,16%	20,22%	2,62%	2,98%	1,79%	24,09%	1,92%	3,16%	4,67%	6,85%	2,06%	11,76%	100%

Table 11: Use of species in translational and applied research purposes

	Human Cancer	Human Infectious Disorders	Human Cardiovascular Disorders	Human Nervous and Mental Disorders	Human Respiratory Disorders	Human Gastrointestinal Disorders including Liver	Human Musculoskeletal Disorders	Human Immune Disorders	Human Urogenital/Reproductive Disorders	Human Sensory Organ Disorders (skin, eyes and ears)	Human Endocrine/Metabolism Disorders	Other Human Disorders	Animal Diseases and Disorders	Animal Welfare	Diagnosis of diseases	Plant diseases	Non-regulatory toxicology and ecotoxicology	Total
Mice	127.486	21.493	19.029	43.379	11.945	7.783	2.510	19.608	6.964	2.527	16.686	1.969	4.512	561	2.999		4.353	293.804
Rats	1.653	339	7.367	15.135	3.555	2.343	1.941	2.128	1.322	813	9.155	766	805	30	230	15	4.510	52.107
Guinea-Pigs	2	264	280	340	1.670		9			192			59	240	365		96	3.517
Hamsters (Syrian)	26	572		52					4	6								660
Mongolian gerbil		1.069			11					12			621					1.713
Other Rodents		1.764											68		4			1.836
Rabbits	31	51	176	34	1	36	125	10		52	201		271		173	21		1.182
Cats													296					296
Dogs	20		12	119	90		2			1	51	8	643	4	52		20	1.022
Ferrets		162											20					182
Other carnivores													2					2
Horses, donkeys & cross-breeds							15	5					79	35	24			158
Pigs	98	42	255	7	108	94	37	8	3	21	63	186	2.303	462	100		446	4.233
Goats													750		7			757
Sheep	11	8	113	29	23		271						258		700			1.413

Cattle													966	482	77			1.525
Marmoset and tamarins		2									1							3
Cynomolgus monkey			38	17	32			30			39	1					12	169
Rhesus monkey	3	6									4							13
Baboons			6															6
Other species of Old World Monkeys		1																1
Other Mammals		86						21					4	45				156
Domestic fowl		93											4.470	3.516	44			8.123
Other birds													3.922	86	15			4.023
Rana																	1	1
Xenopus		5	44	25						12							4	90
Other Amphibians				18														18
Zebra fish			392	109						695							89	1.285
Other Fish													624	808			1.723	3.155
Total	129.330	25.957	27.712	59.264	17.435	10.256	4.910	21.789	8.314	4.331	26.200	2.930	20.673	6.269	4.790	36	11.254	381.450
%	33,90%	6,80%	7,26%	15,54%	4,57%	2,69%	1,29%	5,71%	2,18%	1,14%	6,87%	0,77%	5,42%	1,64%	1,26%	0,01%	2,95%	100%

Table 12: Regulatory use of animals and routine production purposes

	Quality control (incl batch safety and potency test- ing)	Other efficacy and tolerance testing	Toxicity and other safety testing includ- ing pharma- cology	Routine pro- duction	Total
Mice	137844	36002	94054	3945	271845
Rats	63578	3642	103875	766	171861
Guinea-Pigs	8518	73	5335	9	13935
Hamsters (Syrian)	350		296		646
Hamsters (Chinese)			30		30
Mongolian gerbil			1546	167	1713
Other Rodents			8258		8258
Rabbits	14284	10	6662	87515	108471
Cats	147	69	429	18	663
Dogs		272	2608		2880
Other carnivores	235	120	142		497
Horses, donkeys & cross-breeds	4		19		23
Pigs	567	2365	918	35	3885
Goats			50	5	55
Sheep	52	16	134	74	276
Cattle	466	264	299	13	1042
Marmoset and tamarins			160		160
Cynomolgus mon- key			2447		2447
Other Mammals		63	77	15	155
Domestic fowl	9348	2323	192	49	11912
Other birds		138	1321		1459
Reptiles				300	300
Rana			132		132
Other Amphibians			60		60
Zebra fish			16967		16967
Other Fish			10583		10583
Total	235393	45357	256594	92911	630255
%	37,35%	7,20%	40,71%	14,74%	100%

Table 13: Use of animals in quality control purposes

	Batch safety testing	Pyrogenicity testing	Batch potency testing	Other quality controls	Total
Mice	25.705		112.139		137.844
Rats	4.316		59.262		63.578
Guinea-Pigs	3.603		4.906	9	8.518
Hamsters (Syrian)			350		350
Rabbits	209	6.992	7.042	41	14.284
Cats	50		97		147
Other carnivores	235				235
Horses, donkeys & cross-breeds	0		4		4
Pigs	377		150	40	567
Sheep			52		52
Cattle	34		432		466
Domestic fowl	9.260			88	9.348
Total	43.789	6.992	184.434	178	235.393
%	18,60%	2,97%	78,35%	0,08%	100%

Table 14: Use of animals in routine production purposes

	Blood based products	Monoclonal antibodies	Other product types	Total
Mice	8	1098	2.839	3.945
Rats	10	385	371	766
Guinea-Pigs			9	9
Mongolian gerbil			167	167
Rabbits	86.084	16	1.415	87.515
Cats			18	18
Pigs	12		23	35
Goats	5			5
Sheep	61	1	12	74
Cattle			13	13
Other Mammals			15	15
Domestic fowl	24		25	49
Reptiles			300	300
Total	86.204	1.500	5.207	92.911
%	92,78%	1,61%	5,60%	100%

Table 15: Use of animals in toxicity and other safety testing by test type purposes

	Acute and sub-acute	Skin irritation/corrosion	Skin sensitisation	Repeated dose toxicity	Carcinogenicity	Genotoxicity	Reproductive toxicity	Developmental toxicity	Neurotoxicity	Kinetics	Pharmacodynamics	Phototoxicity	Ecotoxicity	Safety testing in food and feed area	Target animal safety	Eye irritation/corrosion	Other toxicity/safety testing	Total
Mice	2.800		6.091	6.386	1.262	3.299	32			20.957	50.535		280		564		1.848	94.054
Rats	3.460	41	12	13.582	3.923	787	21.866	1.1657	90	13.780	33.451	12			60		1.154	103.875
Guinea-Pigs	2		5.008							44	193						88	5.335
Hamsters (Syrian)		31		142						23	100							296
Hamsters (Chinese)						30												30
Mongolian gerbil											1546							1.546
Other Rodents													5089		314		2855	8.258
Rabbits	84	803	59	276		58	299	2.449		366	1.891					225	152	6.662
Cats										305	77				23		24	429
Dogs	62			739						1.267	484				36		20	2.608
Other carnivores	58														84			142
Horses, donkeys & cross-breeds										19								19
Pigs	26	19		141						245	308				167		12	918
Goats										50								50
Sheep										57	21						56	134
Cattle										160	20				3		116	299
Marmoset and tamarins				42						35	22						61	160

Cynomolgus monkey				1.461			191	113		351	50					281	2.447	
Other Mammals														77			77	
Domestic fowl										12		15		165			192	
Other birds	40									21		1.260					1.321	
Rana												132					132	
Other Amphibians												60					60	
Zebra fish								800					16.167				16.967	
Other Fish	2.076												8.391		108	8	10.583	
Total	8.608	894	11.170	22.769	5.185	4.174	22.388	15.019	90	37.692	88.698	12	31.394		1601	225	6.675	256.594
%	3,35%	0,35%	4,35%	8,87%	2,02%	1,63%	8,73%	5,85%	0,04%	14,69%	34,57%	0,00%	12,23%		0,62%	0,09%	2,60%	100%

Table 16: Use of animals in repeated dose toxicity testing methods

	up to 28 days	29 - 90 days	> 90 days	Total
Mice	5.735	509	142	6.386
Rats	10.119	2.199	1.264	13.582
Hamsters (Syrian)	142			142
Rabbits	228	16	32	276
Dogs	557	107	75	739
Pigs	83	6	52	141
Marmoset and tamarins		6	36	42
Cynomolgus monkey	392	289	780	1.461
Rhesus monkey		70		70
Total	17.256	3.132	2.381	22.769
%	75,79%	13,76%	10,46%	100%

Table 17: Use of animals in acute and subacute toxicity testing methods

	LD50, LC50	Other lethal methods	Non lethal methods	Total
Mice	192	117	2.491	2.800
Rats	1.233		2.227	3.460
Guinea-Pigs			2	2
Rabbits			84	84
Dogs			62	62
Carnivores	58			58
Pigs			26	26
Other birds			40	40
Other Fish	2.076			2.076
Total	7.161	600	6.749	14.510
%	49,35%	4,14%	46,51%	100%

Table 18: Use of animals in ecotoxicity testing methods

	Acute toxicity	Chronic toxicity	Reproductive ecotoxicity	Endocrine activity	Bioaccumulation	Other ecotoxicity	Total
Mice	280						280
Domestic fowl	15						15
Other birds	464		796				1.260
Rana	132						132
Other Amphibians		60					60
Zebra fish	3486	2883	847	8210	591	150	16167
Other Fish	3644	3345		48	1287	67	8391
Total	6.792	7.398	3.886	10.702	1.723		31394
%	21,93%	23,88%	12,54%	34,55%	5,56%		100%

5. Use of species and severity

Table 19: Use of species and severity in total

	Non-recovery	%	Mild [up to and including]	%	Moderate	%	Severe	%	Total
Mice	798.096	39,29%	772.485	38,03%	364.470	17,94%	96.287	4,74%	2.031.338
Rats	81.720	25,05%	146.700	44,97%	92.781	28,44%	5.032	1,54%	326.233
Guinea-Pigs	1.692	9,00%	11.900	63,27%	1.764	9,38%	3.453	18,36%	18.809
Hamsters (Syrian)	69	4,90%	1.246	88,43%	93	6,60%	1	0,07%	1.409
Hamsters (Chinese)			30	100,00%					30
Mongolian gerbil	1.035	19,68%	2.935	55,82%	1.241	23,60%	47	0,89%	5.258
Other Rodents	681	5,08%	12.551	93,68%	151	1,13%	15	0,11%	13.398
Rabbits	40868	36,58%	68.809	61,59%	1.962	1,76%	79	0,07%	111.718
Cats	99	8,90%	830	74,64%	182	16,37%	1	0,09%	1.112
Dogs	76	1,69%	3.923	87,35%	471	10,49%	21	0,47%	4.491
Ferrets	12	5,06%	190	80,17%	35	14,77%			237
Other carnivores	5	0,73%	327	47,67%	354	51,60%			686
Horses, donkeys & cross-breeds	63	4,13%	1.424	93,38%	38	2,49%			1.525
Pigs	3887	29,42%	7.826	59,23%	1.395	10,56%	105	0,79%	13.213
Goats	49	5,14%	893	93,70%	11	1,15%			953
Sheep	204	8,77%	1.105	47,49%	1.004	43,15%	14	0,60%	2.327
Cattle	173	4,17%	3.246	78,22%	670	16,14%	61	1,47%	4.150

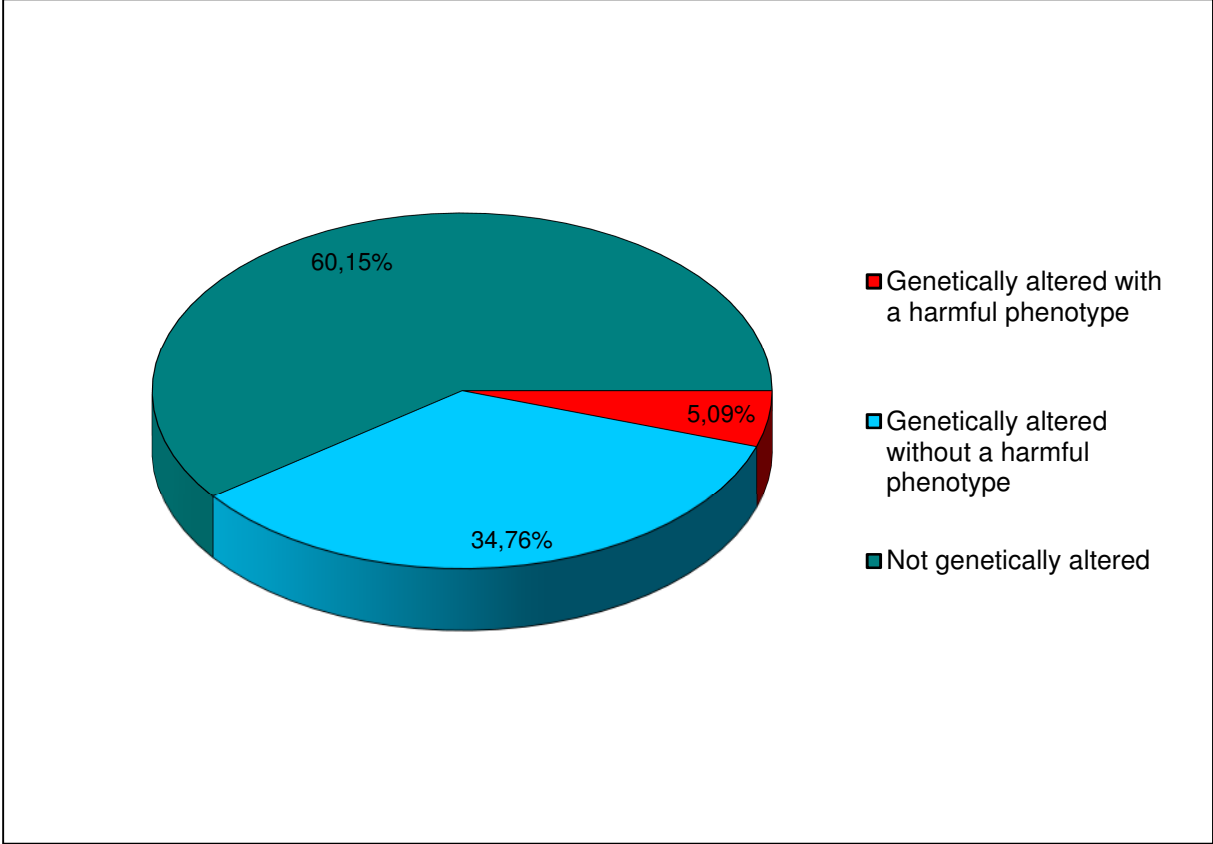
Prosimians			102	100,00%					102
Marmoset and tamarins	12	3,95%	216	71,05%	76	25,00%			304
Cynomolgus monkey	11	0,41%	1.825	68,02%	845	31,49%	2	0,07%	2.683
Rhesus monkey	6	13,33%	12	26,67%	27	60,00%			45
Baboons					2	100,00%	6	100,00%	6
Other species of Old World Monkeys			1	100,00%					1
Other Mammals	310	19,50%	1.065	66,98%	192	12,08%	23	1,45%	1.590
Domestic fowl	4638	15,53%	22.620	75,72%	1.913	6,40%	703	2,35%	29.874
Other birds	972	6,80%	11.411	79,81%	1.910	13,36%	4	0,03%	14.297
Reptiles	257	33,95%	361	47,69%	139	18,36%			757
Rana	11	7,69%			132	92,31%			143
Xenopus	4443	53,97%	3.624	44,02%	165	2,00%			8.232
Other Amphibians	1300	39,33%	1.898	57,43%	107	3,24%			3.305
Zebra fish	40234	33,28%	67.017	55,44%	11.923	9,86%	1704	1,41%	120.878
Other Fish	20757	25,70%	51.420	63,66%	3.779	4,68%	4821	5,97%	80.777
Cephalopods	80	100,00%							80
Total	911.787		1.898.299		426.841		124.936		3.361.863

6. Use of species and genetic status

Table 20: Use of species and genetic status in total

	Not genetically altered	Genetically altered without a harmful phenotype	Genetically altered with a harmful phenotype	Total
Mice	1.005.413	890.249	135.676	2.031.338
Rats	313.427	8.997	3.809	326.233
Guinea-Pigs	18.809			18.809
Hamsters (Syrian)	1.373		36	1.409
Hamsters (Chinese)	30			30
Mongolian gerbil	5.258			5.258
Other Rodents	13.398			13.398
Rabbits	111.629		89	111.718
Cats	1.108		4	1.112
Dogs	4.491			4.491
Ferrets	237			237
Other carnivores	686			686
Horses, donkeys & cross-breeds	1.525			1.525
Pigs	12.935	177	101	13.213
Goats	953			953
Sheep	2.327			2.327
Cattle	4.149	1		4.150
Prosimians	102			102
Marmoset and tamarins	304			304
Cynomolgus monkey	2.683			2.683
Rhesus monkey	45			45
Baboons	6			6
Other species of Old World Monkeys (Cercopithecoidea)	1			1
Other Mammals	1.586	4		1.590
Domestic fowl	29.771	103		29.874
Other birds	14.297			14.297
Reptiles	757			757
Rana	143			143
Xenopus	8.228	4		8.232
Other Amphibians	3.184	121		3.305
Zebra fish	48.437	70.237	2.204	120.878
Other Fish	76.761	3.410	606	80.777
Cephalopods	80			80
Total	1.684.133	973.303	142.525	2.799.961

Figure 4: Use of animals: genetic status



7. Use of Species and re-use

Table 21: Use of species and re-use in total

	(Naive) First use	Re-uses	Total
Mice	2.005.097	26.241	2.031.338
Rats	320.629	5.604	326.233
Guinea-Pigs	18.523	286	18.809
Hamsters (Syrian)	1.403	6	1.409
Hamsters (Chinese)	30		30
Mongolian gerbil	4.883	375	5.258
Other Rodents	13.343	55	13.398
Rabbits	107.652	4.066	111.718
Cats	502	610	1.112
Dogs	2.437	2.054	4.491
Ferrets	207	30	237
Other carnivores	686		686
Horses, donkeys & cross-breeds	1.252	273	1.525
Pigs	12.279	934	13.213
Goats	942	11	953
Sheep	1.719	608	2.327
Cattle	3.762	388	4.150
Prosimians	78	24	102
Marmoset and tamarins	234	70	304
Cynomolgus monkey	2.075	608	2.683
Rhesus monkey	31	14	45
Baboons	6		6
Other species of Old World Monkeys		1	1
Other Mammals	1.523	67	1.590
Domestic fowl	29.703	171	29.874
Other birds	13.970	327	14.297
Reptiles	453	304	757
Rana	143		143
Xenopus	6.943	1.289	8.232
Other Amphibians	3.305		3.305
Zebra fish	118.423	2.455	120.878
Other Fish	80.749	28	80.777
Cephalopods	80		80
Total uses	2.753.062	46.899	2.799.961

Figure 5: Use of species groups and re-use

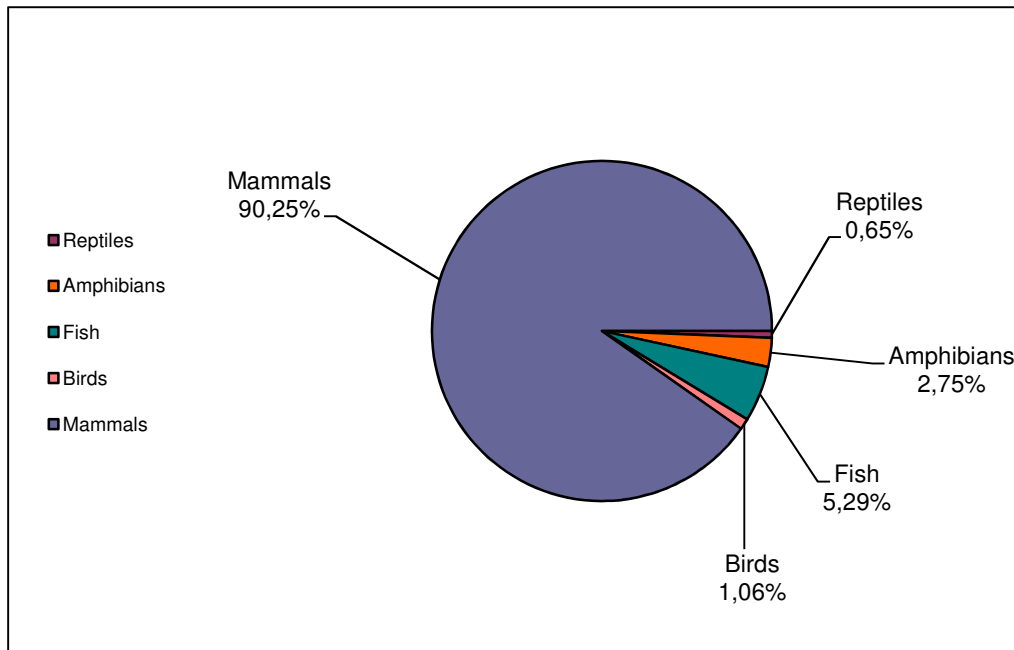
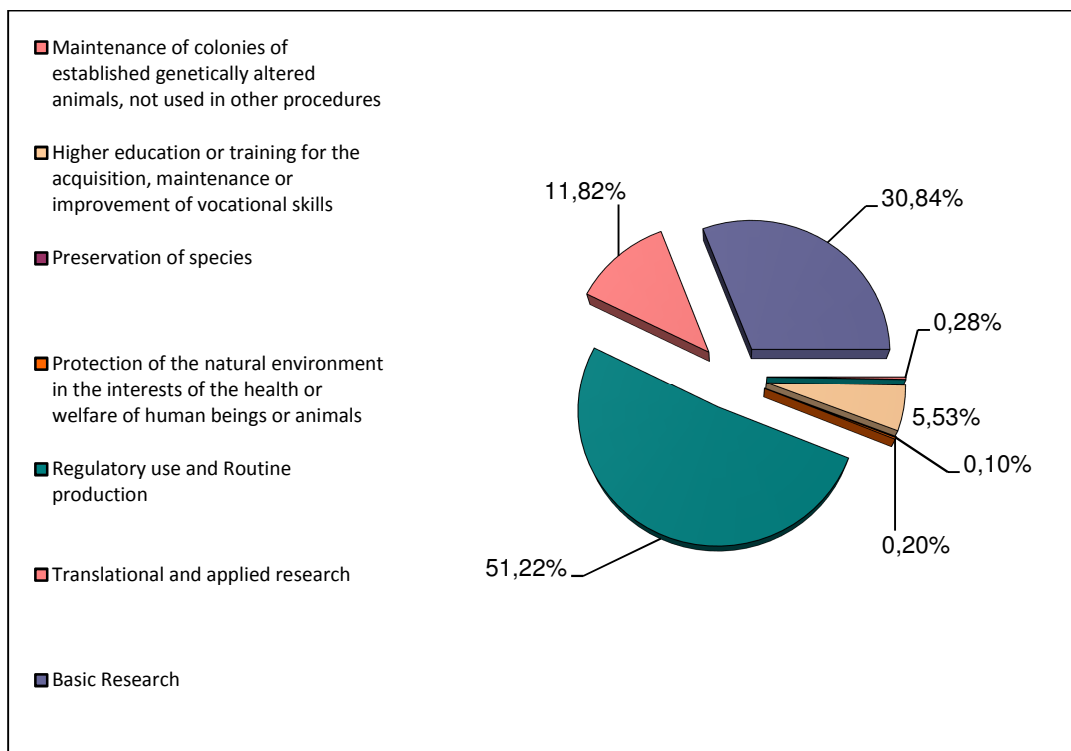


Figure 6: Primary purpose and re-use



8. Purposes and severity

Table 22: Purpose and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Basic Research	821.926	602.591	199.281	19.461	1.643.259
Translational and applied research	92.059	158.016	122.106	9.269	381.450
Regulatory use and Routine production	51.753	359.504	136.467	82.531	630.255
Protection of the natural environment in the interests of the health or welfare of human beings or animals	47	5.234	718	12	6.011
Preservation of species	4.918	24.372	508		29.798
Higher education or training for the acquisition, maintenance or improvement of vocational skills	19.835	24.477	11.484	97	55.893
Forensic enquiries	29	11			40
Maintenance of colonies of established genetically altered animals, not used in other procedures	11.193	23.787	17.266	1.009	53.255
Total	1.001.760	1.197.992	487.830	112.379	2.799.961
%	35,78%	42,79%	17,42%	4,01%	100%

Table 23: Basic research purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Oncology	36.230	39.085	33.133	1.776	110.224
Cardiovascular Blood and Lymphatic System	116.411	44.962	19.793	2.235	183.401
Nervous System	212.498	72.479	43.455	3.771	332.203
Respiratory System	28.251	7.549	6.993	260	43.053
Gastrointestinal System including Liver	28.718	12.016	7.846	421	49.001
Musculoskeletal System	15.281	10.220	3.632	275	29.408
Immune System	164.076	168.572	55.969	7.292	395.909
Urogenital/ Reproductive System	17.508	10.703	3.149	195	31.555
Sensory Organs (skin, eyes and ears)	29.733	16.240	3.403	2.503	51.879
Endocrine System/ Metabolism	37.250	30.217	9.244	82	76.793
Multisystemic	83.470	24.958	3.997	173	112.598
Ethology / Animal Behaviour / Animal Biology	2.201	28.365	3.312	28	33.906
Other basic research	50.299	137.225	5.355	450	193.329
Total	821.926	602.591	199.281	19.461	1.643.259
%	50,02%	36,67%	12,13%	1,18%	100%

Table 24: Basic research: species and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe
Mice	702084	477036	177250	16956
Rats	56041	15680	14521	2246
Guinea-Pigs	467	421	28	
Hamsters (Syrian)	13	6		
Mongolian gerbil	717	393	433	1
Other Rodents	364	2466	143	
Rabbits	753	726	293	2
Cats	17	60	34	
Dogs		433		
Ferrets	12	32	11	
Other carnivores	5	157	25	
Horses, donkeys & cross-breeds	2	1230	23	
Pigs	1049	1877	281	4
Goats		70		
Sheep	59	144	134	2
Cattle	12	1195	134	
Prosimians		102		
Marmoset and tamarins	12	86	37	
Cynomolgus monkey	3	10	52	
Rhesus monkey	6		21	
Other Mammals	90	654	177	11
Domestic fowl	2361	5671	225	229
Other birds	853	5804	1787	
Reptiles	257	10	139	
Xenopus	3945	3498	153	
Other Amphibians	1284	929	45	
Zebra fish	37193	59044	3190	10
Other Fish	14295	24857	145	
Cephalopods	32			
Total	821926	602591	199281	19461

Table 25: Translational and applied research: purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Human Cancer	15.415	47.960	64.019	1.936	129.330
Human Infectious Disorders	7.367	11.518	5.907	1.165	25.957
Human Cardiovascular Disorders	15.853	6.891	3.999	969	27.712
Human Nervous and Mental Disorders	16.135	28.353	14.158	618	59.264
Human Respiratory Disorders	3.174	7.994	5.025	1.242	17.435
Human Gastrointestinal Disorders including Liver	2.340	5.436	2.388	92	10.256
Human Musculoskeletal Disorders	1.706	483	2.540	181	4.910
Human Immune Disorders	10.029	5.043	6.645	72	21.789
Human Urogenital/Reproductive Disorders	3.325	1.065	3.809	115	8.314
Human Sensory Organ Disorders (skin, eyes and ears)	1.632	1.986	712	1	4.331
Human Endocrine/Metabolism Disorders	6.960	15.713	3.516	11	26.200
Other Human Disorders	1.038	732	1.151	9	2.930
Animal Diseases and Disorders	909	14.705	3.167	1.892	20.673
Animal Welfare	1.707	3.560	928	74	6.269
Diagnosis of diseases	1.982	1.097	994	717	4.790
Plant diseases	15		21		36
Non-regulatory toxicology and ecotoxicology	2.472	5.480	3.127	175	11.254
Total	92.059	158.016	122.106	9.269	381.450
%	24,13%	41,43%	32,01%	2,43%	

Table 26: Translational and applied research: species and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe
Mice	70.327	111.083	104.577	7.817
Rats	16.365	23.403	11.822	517
Guinea-Pigs	952	1.611	645	309
Hamsters (Syrian)	38	586	36	
Mongolian gerbil	11	956	703	43
Other Rodents	91	1.729	1	15
Rabbits	335	193	611	43
Cats		214	81	1
Dogs		903	116	3
Ferrets		158	24	
Other carnivores		2		
Horses, donkeys & cross-breeds	35	108	15	
Pigs	816	2.989	330	98
Goats		750	7	
Sheep	39	583	779	12
Cattle	153	980	331	61
Marmoset and tamarins			3	
Cynomolgus monkey		169		
Rhesus monkey		7	6	
Other Old World Monkeys		1		
Other Mammals	80	76		
Domestic fowl	1.872	4.693	1.293	265
Other birds	35	3.984	4	
Rana	1			
Xenopus	9	69	12	
Other Amphibians		18		
Zebra fish	392	871	8	14
Other Fish	508	1880	702	65
Total	92.059	158.016	122.106	9.269

Table 27: Regulatory use/routine production purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Routine production	39.306	50.638	2.955	12	92.911
Quality control (incl batch safety and potency testing)	897	119.117	45.518	69.861	235.393
Other efficacy and tolerance testing	1.369	19.410	24.099	479	45.357
Toxicity and other safety testing including pharmacology	10.181	170.339	63.895	12.179	256.594
Total	51.753	359.504	136.467	82.531	630.255
%	8,21%	57,04%	21,65%	13,09%	100%

Table 28: Regulatory use/routine production: species and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe
Mice	3.432	140.340	57.213	70.860
Rats	4.607	102.155	63.294	1.805
Guinea-Pigs	224	9.510	1.057	3.144
Hamsters (Syrian)	1	587	57	1
Hamsters (Chinese)		30		
Mongolian gerbil	72	1.563	75	3
Other Rodents	56	8.195	7	
Rabbits	39.674	67.714	1.049	34
Cats	82	514	67	
Dogs	70	2.437	355	18
Other carnivores		168	329	
Horses, donkeys & cross-breeds		23		
Pigs	740	2.421	721	3
Goats		51	4	
Sheep		219	57	
Cattle		837	205	
Marmoset and tamarins		124	36	
Cynomolgus monkey	8	1.644	793	2
Other Mammals		128	15	12
Domestic fowl	40	11.268	395	209
Other birds		1.340	115	4
Reptiles		300		
Rana			132	
Other Amphibians			60	
Zebra fish	2.501	4.061	8.725	1.680
Other Fish	246	3.875	1.706	4.756
Total	51.753	359.504	136.467	82.531

Table 29: Quality control purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Batch safety testing	580	40.244	2.667	298	43.789
Pyrogenicity testing		6847	145		6.992
Batch potency testing	230	71.944	42.706	69.554	184.434
Other quality controls	87	82		9	178
Total	897	119.117	45.518	69.861	235.393
%	0,38%	50,60%	19,34%	29,68%	100%

Table 30: Routine production purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Blood based products	38.388	47.788	28		86.204
Monoclonal antibodies	583	866	51		1.500
Other product types	335	1984	2.876	12	5.207
Total	39.306	50.638	2.955	12	92.911
%	42,31%	54,50%	3,18%	0,01%	100%

Table 31: Toxicity and other safer testing by test type purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Acute and sub-acute	3	4.814	1.417	2.374	8.608
Skin irritation/corrosion		855	39		894
Skin sensitisation		10.353	817		11.170
Eye irritation/corrosion		117	108		225
Repeated dose toxicity	4	14.459	7.759	547	22.769
Carcinogenicity	132	4.068	938	47	5.185
Genotoxicity	78	3.955	112	29	4.174
Reproductive toxicity		20.378	1.777	233	22.388
Developmental toxicity		14.033	168	818	15.019
Neurotoxicity		90			90
Kinetics	323	28.888	7.719	762	37.692
Pharmaco-dynamics (incl safety pharmacology)	6.445	46.127	32.321	3.805	88.698
Phototoxicity			12		12
Ecotoxicity	2.739	14.416	10.675	3.564	31.394
Target animal safety	60	1.516	25		1.601
Other toxicity/safety testing	397	6.270	8		6.675
Total	10.181	170.339	63.895	12.179	256.594
%	3,97%	66,38%	24,90%	4,75%	100%

Table 32: Repeated dose toxicity testing methods and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
up to 28 days	4	10.540	6.196	516	17.256
29 - 90 days		2.755	360	17	3.132
> 90 days		1.164	1.203	14	2.381
Total	4	14.459	7.759	547	22.769
%	0,02%	63,50%	34,08%	2,40%	100%

Table 33: Acute and subacute toxicity testing methods and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
LD50, LC50	3	316	1.021	2.219	3.559
Other lethal methods		91	14	12	117
Non lethal methods		4.407	382	143	4.932
Total	3	4.814	1417	2.374	8.608
%	0,03%	55,92%	16,46%	27,58%	00%

Table 34: Ecotoxicity testing methods and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Acute toxicity	1.414	3.638	586	2.383	8.021
Chronic toxicity	1.050	2.375	1.704	1.159	6.288
Reproductive ecotoxicity		1.627		16	1.643
Endocrine activity		720	7.538		8.258
Bioaccumulation	71	961	840	6	1.878
Other ecotoxicity	204	5.095	7		5.306
Total	2.739	14.416	10.675	3.564	31.394
%	8,72%	45,92%	34,00%	11,35%	100%

9. Purposes and testing by type of legislation

Table 35: Regulatory use and routine production purposes: type of legislation

	Quality control (incl batch safety and potency test- ing)	Other efficacy and toler- ance test- ing	Toxicity and other safety testing including pharma- cology	Routine pro- duction	Total:	%
Legislation on medicinal prod- ucts for human use	211.765	39.520	151.140	38.776	441.201	70,00%
Legislation on medicinal prod- ucts for veterinary use and their resi- dues	22.741	3.572	11.604	256	38.173	6,06%
Medical devices legislation	847	2	9.775	50.763	61.387	9,74%
Industrial chemi- cals legislation			50.563	6	50.569	8,02%
Plant protection product legislation			31.544	625	32.169	5,10%
Biocides legislati- on		733	341	126	1.200	0,19%
Food legislation including food contact material	40		38	1	79	0,01%
Feed legislation including legisla- tion for the safety of target animals, workers and envi- ronment		1.386	252		1.638	0,26%
Other legislation		144	1.337	2.358	3.839	0,61%
Total:	235.393	45.357	256.594	92.911	630.255	100,00%

Table 36: Quality control purposes: type of legislation

	Batch potency testing	Batch safety testing	Other quality controls	Pyrogenicity testing	Total:
Legislation on medicinal products for human use	179.560	25.765	9	6.431	211.765
Legislation on medicinal products for veterinary use and their residues	4.588	18.024	89	40	22.741
Medical devices legislation	286		40	521	847
Food legislation including food contact material			40		40
Other legislation		476	12		488
Total:	184.434	43.789	178	6.992	235.393

Table 37: Routine production purposes: type of legislation

	Blood based products	Monoclonal antibodies	Other product types	Total:
Legislation on medicinal products for human use	38.412	44	320	38.776
Legislation on medicinal products for veterinary use and their residues			256	.256
Medical devices legislation	47.789	50	2.924	50.763
Industrial chemicals legislation			6	6
Plant protection product legislation		372	253	625
Biocides legislation			126	126
Food legislation including food contact material			1	1
Other legislation	3	1.034	1.321	2.358
Total:	86.204	1.500	5.207	92.911

Table 38: Toxicity and other safety testing by test type purposes: type of legislation

	Legislation on medicinal products for human use	Legislation on medicinal products for veterinary use and their residues	Medical devices legislation	Industrial chemicals legislation	Plant protection product legislation	Biocides legislation	Food legislation including food contact material	Feed legislation including legislation for the safety of target animals, workers and environment	Other legislation	Total
Acute and sub-acute	1.019	355	2.649	2.175	2.224		38		148	8.608
Skin irritation/corrosion	22		722	127	23					894
Skin sensitisation	1.190	35	4.855	4.394	681				15	11.170
Eye irritation/corrosion	4		36	169	16					225
Repeated dose toxicity	15.013	2.209	298	4.354	895					22.769
Carcinogenicity	356		506	1.213	3.110					5.185
Genotoxicity	667		269	1.978	1.260					4.174
Reproductive toxicity	1.618	839		17.502	2.429					22.388
Developmental toxicity	113			14.422	484					15.019
Neurotoxicity	0			10	80					90
Kinetics	35.509	1.509	3	100	571					37.692
Pharmaco-dynamics (incl safety pharmacology)	86.601	2.043	13		29				12	88.698
Phototoxicity	12									12
Ecotoxicity	6.835	2.879	294	3.598	16.573	51		252	912	31.394
Target animal safety	340	947			314					1.601
Other toxicity/safety testing	1.841	788	130	521	2.855	290			250	6.675
Total:	151.140	11.604	9.775	50.563	31.544	341	38	252	1.337	256.594

Table 39: Repeated dose toxicity purposes: type of legislation

	up to 28 days	29 - 90 days	> 90 days	Total
Legislation on medicinal products for human use	11.674	1.144	2.195	15.013
Legislation on medicinal products for veterinary use and their residues	1679	408	122	2.209
Medical devices legislation	104	194		298
Industrial chemicals legislation	3.084	1.246	24	4.354
Plant protection product legislation	715	140	40	895
Total	17.256	3.132	2.381	22.769

Table 40: Acute and subacute toxicity testing methods: type of legislation

	LD50, LC50	Other lethal methods	Non lethal methods	Total
Legislation on medicinal products for human use	11	79	929	1019
Legislation on medicinal products for veterinary use and their residues	355			355
Medical devices legislation			2649	2649
Industrial chemicals legislation	1183		992	2175
Plant protection product legislation	2010		214	2224
Food legislation including food contact material		38		38
Other legislation			148	148
Total	3559	117	4932	8608

Table 41: Ecotoxicity purposes: type of legislation

	Acute toxicity	Chronic toxicity	Reproductive ecotoxicity	Endocrine activity	Bioaccumulation	Other ecotoxicity	Total
Legislation on medicinal products for human use	20	1.173		5.530	112		6.835
Legislation on medicinal products for veterinary use and their residues	30			2.320	529		2.879
Medical devices legislation	294						294
Industrial chemicals legislation	2.648	600	200			150	3.598
Plant protection product legislation	3.898	4.515	1.443	408	1.166	5.143	16.573
Biocides legislation					51		51
Feed legislation including legislation for the safety of target animals, workers and environment	252						252
Other legislation	879				20	13	912
Total	8.021	6.288	1.643	8.258	1.878	5.306	31.394

10. Purposes and origin of legislative requirement

Table 42: Regulatory use and routine production: origin of legislative requirement

	Quality control (incl batch safety and potency testing)	Other efficacy and tolerance testing	Toxicity and other safety testing including pharmacology	Routine production	Total
Legislation satisfying EU requirements	220.189	28.782	254.358	91.465	594.794
Legislation satisfying national requirements only [within EU]		16.575	1.403	1.446	19.424
Legislation satisfying Non-EU requirements only	15.204		833		16.037
Total	235.393	45.357	256.594	92.911	630.255

Table 43: Toxicity and other safety testing: origin of legislative requirement

	Legislation satisfying EU requirements	Legislation satisfying national requirements only [within EU]	Legislation satisfying Non-EU requirements only	Total
Acute and sub-acute	8.386	186	36	8.608
Skin irritation/corrosion	872	19	3	894
Skin sensitisation	11.032	15	123	11.170
Eye irritation/corrosion	222		3	225
Repeated dose toxicity	22.697		72	22.769
Carcinogenicity	5.185			5.185
Genotoxicity	4.174			4.174
Reproductive toxicity	22.386		2	22.388
Developmental toxicity	15.019			15.019
Neurotoxicity	90			90
Kinetics	37.650	30	12	37.692
Pharmaco-dynamics (incl safety pharmacology)	88.277		421	88.698
Phototoxicity	12			12
Ecotoxicity	30.226	1.153	15	31.394
Target animal safety	1.541		60	1.601
Other toxicity/safety testing	6.589		86	6.675
Total	254.358	1.403	833	256.594

Table 44: Repeated dose toxicity: origin of legislative requirement

	up to 28 days	29 - 90 days	> 90 days	Total
Legislation satisfying EU requirements	17.184	3.132	2.381	22.697
Legislation satisfying national requirements only [within EU]				
Legislation satisfying Non-EU requirements only	72			72
Total	17.256	3.132	2.381	22.769

Table 45: Acute and subacute toxicity testing: origin of legislative requirement

	LD50, LC50	Other lethal methods	Non lethal methods	Total
Legislation satisfying EU requirements	3.543	79	4.764	8.386
Legislation satisfying national requirements only [within EU]		38	148	186
Legislation satisfying Non-EU requirements only	16		20	36
Total	3.559	117	4.932	8.608

Table 46 Ecotoxicity testing: origin of legislative requirement

	Acute toxicity	Chronic toxicity	Endocrine activity	Bioaccumulation	Other ecotoxicity	Total
Legislation satisfying EU requirements	6.886	6.288	8.258	1.858	5.293	28.583
Legislation satisfying national requirements only [within EU]	1120			20	13	1.153
Legislation satisfying Non-EU requirements only	15					15
Total	8.021	6.288	8.258	1.878	5.306	29.751