

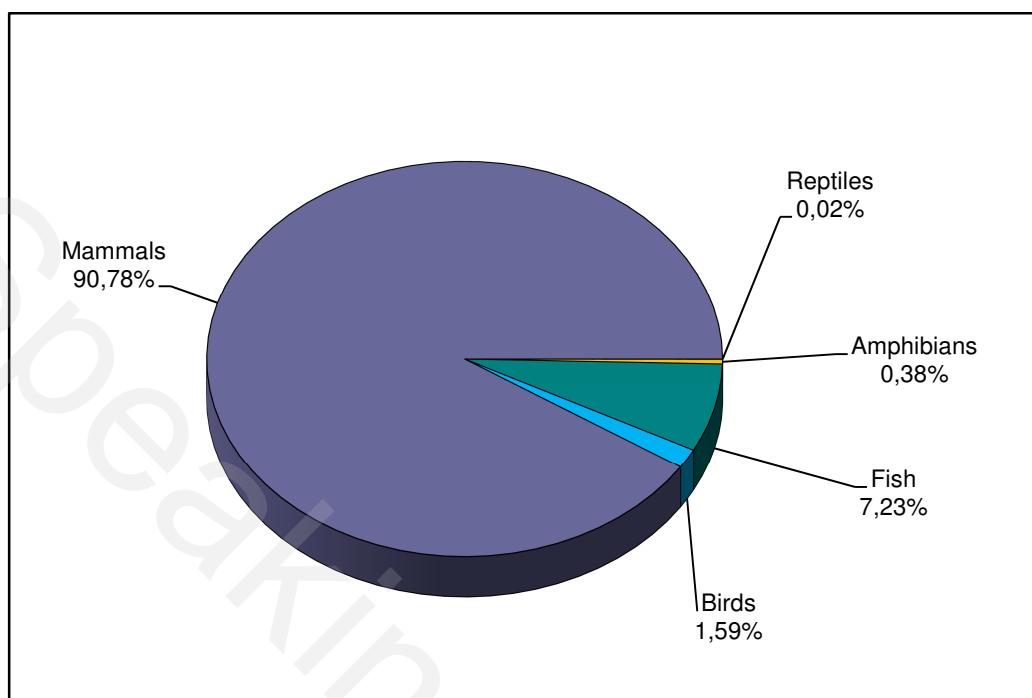
## 1. Animals used by species

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	228	0.01%
Cynomolgus monkey	2.075	0.08%
Rhesus monkey	26	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	3.305	0.12%
Zebra fish	118.423	4.30%
Other Fish	80.749	2.93%
Cephalopods	80	0.00%
<b>Total</b>	<b>2.753.051</b>	<b>100.00%</b>

Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (excludes re-use)

Figure 1: Animals used by species groups



Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (excludes re-use)

Table 2: Animals used by species groups

Species grouping Level 1	Number of Animals
Warm-blooded vertebrates	2.542.955
Cold-blooded vertebrates	210.016
Invertebrates	80
<b>Total</b>	<b>2.743.051</b>

Mammals	Number of Animals
Rodents	2.363.908
Rabbits	107.652
Carnivores	3.832
Equidae	1.252
Artiodactyla	18.702
Non-human primates	2.413
Other mammals	1.523
<b>Total</b>	<b>2.499.282</b>

Species grouping Level 2	Number of Animals
Mammals	2.499.282
Birds	43.673
Fish	199.172
Amphibians	10.391
Reptiles	453
Cephalopods	80
<b>Total</b>	<b>2.753.051</b>

Non-human primates	Number of Animals
Prosimians	78
New World Monkeys	228
Old World Monkeys	2.107
<b>Total</b>	<b>2.413</b>

Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (excludes re-use)

## 2. Origin of used Animals

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	<b>2.005.097</b>
Rats	315.442	2.370	55	2.762	<b>320.629</b>
Guinea-Pigs	18.406	117			<b>18.523</b>
Hamsters (Syrian)	1.403				<b>1.403</b>
Hamsters (Chinese)	30				<b>30</b>
Mongolian gerbil	4.525	290		68	<b>4.883</b>
Other Rodents	911	12.432			<b>13.343</b>
Rabbits	106.486	300		866	<b>107.652</b>
Cats	215	97		190	<b>502</b>
Dogs	389	789		1.259	<b>2.437</b>
Ferrets	145	24		38	<b>207</b>
Other carnivores	413	269	4		<b>686</b>
Horses, donkeys & cross-breeds	304	948			<b>1.252</b>
Pigs	9.131	3.148			<b>12.279</b>
Goats	61	881			<b>942</b>
Sheep	759	960			<b>1.719</b>
Cattle	1.959	1.803			<b>3.762</b>
Prosimians	78				<b>78</b>
Marmoset and tamarins	228				<b>228</b>
Cynomolgus monkey	94			1.981	<b>2.075</b>

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Rhesus monkey	26					26
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
<b>Total</b>	<b>2.607.355</b>	<b>115.043</b>	<b>11.751</b>	<b>18.913</b>		<b>2.753.051</b>

Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (excludes re-use)

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
<b>Warm-blooded vertebrates</b>	2.443.175	83.685	476	15.630	<b>2.542.955</b>
<b>Cold-blooded vertebrates</b>	164.180	31.310	11.243	3.283	<b>210.016</b>
<b>Invertebrates</b>		48	32		<b>80</b>
<b>Total</b>	<b>2.607.355</b>	<b>115.043</b>	<b>11.751</b>	<b>18.913</b>	<b>2.753.051</b>

	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
<b>Mammals</b>	2.412.171	71.418	377	15.327	<b>2.499.282</b>
<b>Birds</b>	31.004	12.267	99	303	<b>43.673</b>
<b>Fish</b>	157.481	29.280	11.243	1.168	<b>199.172</b>
<b>Amphibians</b>	6.692	1.812		1.887	<b>10.391</b>
<b>Reptiles</b>	7	218		228	<b>453</b>
<b>Cephalopods</b>		48	32		<b>80</b>
<b>Total</b>	<b>2.607.355</b>	<b>115.043</b>	<b>11.751</b>	<b>18.913</b>	<b>2.753.051</b>

	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
<b>Rodents</b>	2.291.566	61.004	373	10.965	<b>2.363.908</b>
<b>Rabbits</b>	106.486	300		866	<b>107.652</b>
<b>Carnivores</b>	1.162	1.179	4	1.487	<b>3.832</b>
<b>Equidae</b>	304	948			<b>1.252</b>
<b>Artiodactyla</b>	11.910	6.792			<b>18.702</b>
<b>Non-human primates</b>	443			1.981	<b>2.413</b>
<b>Other mammals</b>	300	1.195		28	<b>1.523</b>
<b>Total</b>	<b>2.412.171</b>	<b>71.418</b>	<b>377</b>	<b>15.327</b>	<b>2.499.282</b>

Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (excludes re-use)

### 3. Non-Human Primates by source and generation

Table 7: Generation of non-human primates

NHP Generation	Number of Animals
F0	0
F1	508
F2 or greater	1.210
Self-sustaining colony	695
<b>Total</b>	<b>2.413</b>

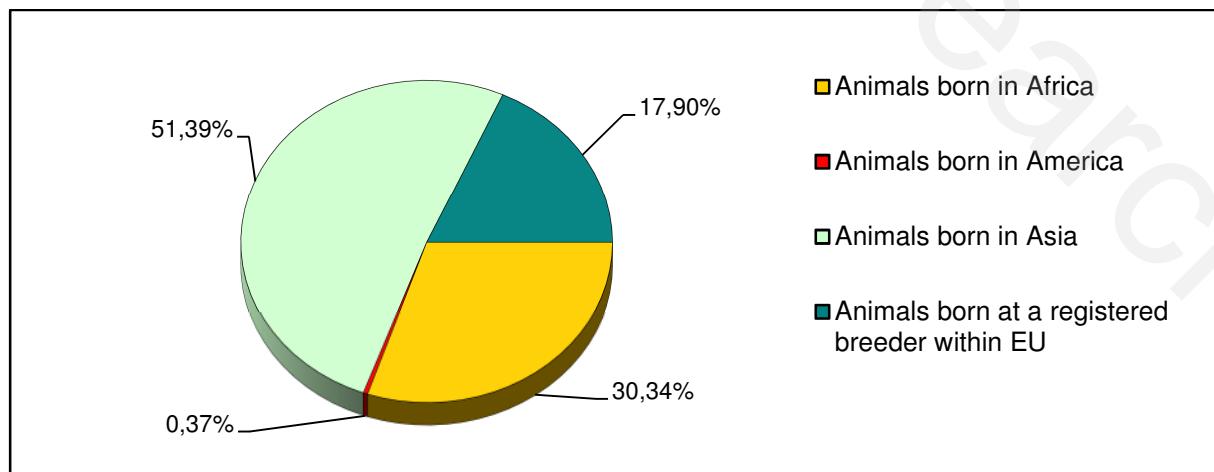
Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (excludes re-use)

Table 8: Origin of non-human primates

NHP Source (origin)	Number of Animals
Animals born at a registered breeder within EU	432
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
<b>Total:</b>	<b>2.413</b>

Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (excludes re-use)

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



Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (excludes re-use)

#### 4. Use of species in procedures by purposes

Table 9: Use of species in procedures by purposes

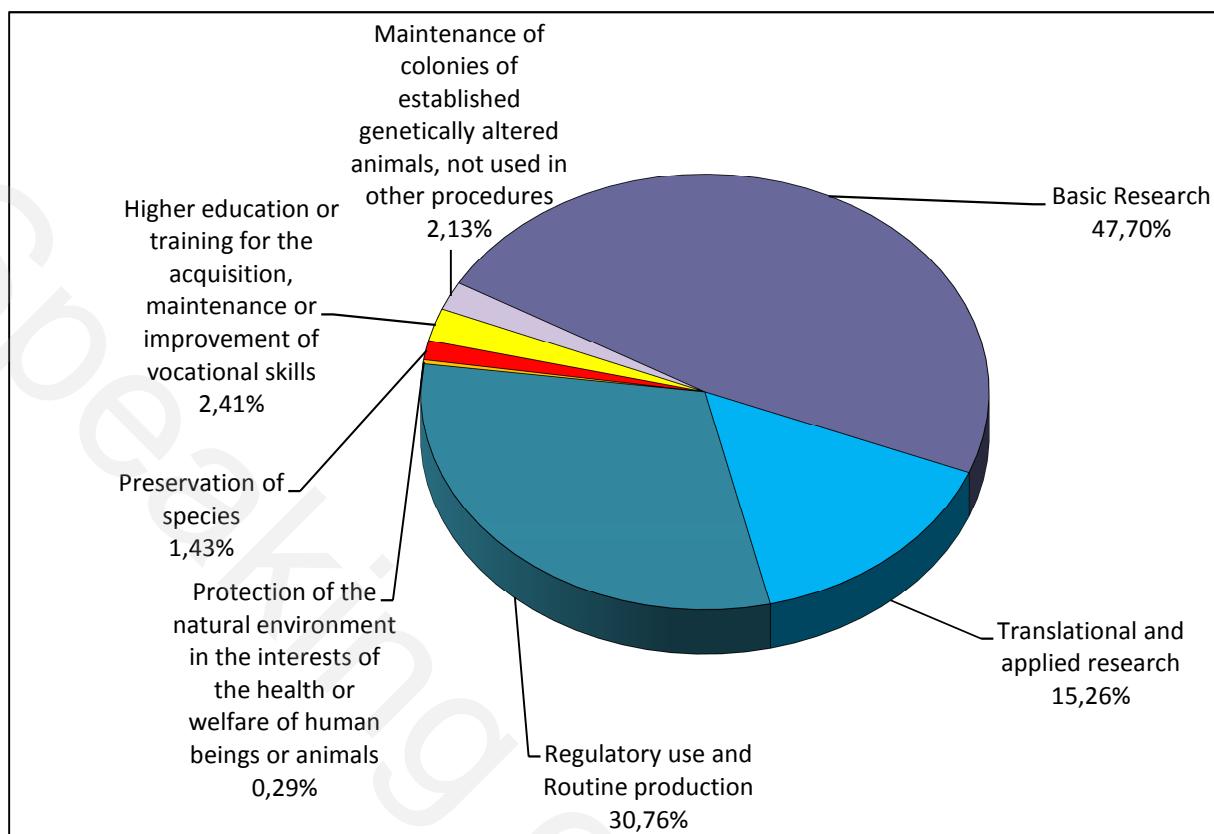
	Basic Research	Translational and applied research	Regulatory use and Routine production	Protection of the natural environment in the interests of the health or welfare of human beings or animals	Preservation of species	Higher education or training for the acquisition. maintenance or improvement of vocational skills	Forensic enquiries	Maintenance of colonies of established genetically altered animals. not used in other procedures	Total
Mice	811.744	237.638	271.384	74	6.511	31.654	4	41.813	1.400.822
Rats	38.003	41.473	171.452		32	11.311		1.047	263.318
Guinea-Pigs	588	3.415	13.827			407			18.237
Hamsters (Syrian)	6	654	646			84			1.390
Hamsters (Chinese)			30						30
Mongolian gerbil	1.074	1.702	1.713			79			4.568
Other Rodents	2.609	1.745	8.258	149		32			12.793
Rabbits	1.307	979	108.449			253			110.988
Cats	111	296	663			42			1.112
Dogs	433	1.022	2.880	6		150			4.491
Ferrets	48	182							230
Other carnivores	187	2	497						686
Horses, donkeys & cross-breeds	1.255	158	23			71			1.507
Pigs	2.771	4.166	3.885	32		1.451			12.305
Goats	70	757	55			22			904
Sheep	303	1.413	276			298			2.290

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Cattle	1.341	1.404	1.042			242			4.029
Prosimians	102								102
Marmoset and tamarins	123	3	160			6			292
Cynomolgus monkey	65	169	2.442			2			2.678
Rhesus monkey	21	13				5			39
Baboons		6							6
Other species of Old World Monkeys			1						1
Other Mammals	865	156	155	115	19	73			1.383
Domestic fowl	6.273	6.355	11.872		816	342			25.658
Other birds	7.897	4.008	1.459		141	147	11		13.663
Reptiles	150		300	43		8			501
Rana			132						132
Xenopus	3.821	81				136			4.038
Other Amphibians	1.150	18	60	951		11			2.190
Zebra fish	66.713	1.285	16.967	954		1.528		700	88.147
Other Fish	26.659	3.037	10.555	3.667	21.778	1.035			66.731
<b>Total</b>	<b>975.689</b>	<b>312.138</b>	<b>629.182</b>	<b>5.991</b>	<b>29.297</b>	<b>49.389</b>	<b>15</b>	<b>43.560</b>	<b>2.045.261</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

Figure 3: Use of animals in procedures by purposes



*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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	75.402	57.515	108.899	31.759	23.930	5.215	252.050	15.306	22.332	30.540	45.831	1.253	141.712	811.744
Rats	744	4.865	16.938	1.572	1.889	1.804	4.307	792	405	1.439	778	206	2.264	38.003
Guinea-Pigs	72			31			143		293			35	14	588
Hamsters (Syrian)			6											6
Mongolian gerbil			711		47		74		242				0	1.074
Other Rodents	103		4		6			20		129		2.347	0	2.609
Rabbits	51	435	11	35		75	1	73	103	0	148	5	370	1.307
Cats			7					14	44	30			16	111
Dogs		18	142		2	143	2	8	35	9	74			433
Ferrets			48											48
Other carnivores								4				173	10	187
Horses, donkeys & cross-breeds				31	88	96	17	80	621	86	25	4	207	1.255
Pigs	74	317	74	109	201	54	413	18	1	157	29	462	862	2.771
Goats											5	59	6	70
Sheep		19	16		13	129	33				21	28	44	303
Cattle		6	2		108		166	456		297	225	47	34	1.341

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Prosimians			41									61		102	
Marmoset and tamarins			22	42				54			5			123	
Cynomolgus monkey			65											65	
Rhesus monkey			21											21	
Other Mammals			76		6	97	17	9	14	2	567	77		865	
Domestic fowl			63	185		151		83	223	4	50	5.514		6.273	
Other birds		35	110		5	1.133	30	10			6.508	66		7.897	
Reptiles			106	30								14		150	
Xenopus	100	70	335		28	44	186	89	358	254	223	2.134		3.821	
Other Amphibians		7	19			382	0					420	322		1.150
Zebra fish	1.477	18.265	12.822		380	10.115	3.407	2.043	1.703	10.443	1.450	836	3.772		66.713
Other Fish	3.139		257	3			1.006	989	1.645	32	172	18.432	984		26.659
<b>Total</b>	<b>81.162</b>	<b>81.552</b>	<b>140.795</b>	<b>33.612</b>	<b>26.877</b>	<b>18.068</b>	<b>263.000</b>	<b>20.090</b>	<b>27.615</b>	<b>43.757</b>	<b>49.023</b>	<b>31.730</b>	<b>158.408</b>	<b>975.689</b>	
<b>%</b>	<b>8.32%</b>	<b>8.36%</b>	<b>14.43%</b>	<b>3.44%</b>	<b>2.75%</b>	<b>1.85%</b>	<b>26.96%</b>	<b>2.06%</b>	<b>2.83%</b>	<b>4.48%</b>	<b>5.02%</b>	<b>3.25%</b>	<b>16.24%</b>	<b>100.00%</b>	

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

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 Gastro-intestinal Disorders including Liver	Human Musculoskeletal Disorders	Human Immune Disorders	Human Urogenital/Reproductive Disorders	Human Sensory Organ Disorders (skin, eyes and ears)	Human Endocrinology/Metabolism Disorders	Other Human Disorders	Animal Diseases and Disorders	Animal Welfare	Diagnosis of diseases	Plant diseases	Non-regulatory toxicology and ecotoxicology	Total	
Mice	113.721	17.404	11.782	32.621	10.068	6.279	1.527	12.899	4.336	1.466	12.987	1.288	4.506	547	2.830		3.377	<b>237.638</b>	
Rats		1.288	335	3.150	14.059	3.288	2.333	1.277	1.129	957	672	7.287	741	802	24	170		3.961	<b>41.473</b>
Guinea-Pigs		2	264	280	340	1.643				192				59	240	365		30	<b>3.415</b>
Hamsters (Syrian)		26	572		52				4									654	
Mongolian gerbil			1.069							12				621				1.702	
Other Rodents			1.689											56				1.745	
Rabbits		31	51	175	34		36	125	10		52			271		173	21	979	
Cats														296				296	
Dogs		20		12	119	90		2			1	51	8	643	4	52		20	<b>1.022</b>
Ferrets			162											20				182	
Other carnivores														2				2	
Horses, donkeys & cross-breeds								15	5					79	35	24		158	
Pigs		98	42	254	6	108	88	36	8	3	21	40	186	2.271	462	97		446	<b>4.166</b>
Goats														750		7		757	
Sheep		11	8	113	29	23		271						258		700		1.413	

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Cattle														845	482	77			1.404
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											4.208	2.010	44			6.355	
Other birds													3.922	86				4.008	
Xenopus			44	25					12									81	
Other Amphibians				18														18	
Zebra fish			392	109						695							89	1.285	
Other Fish													590	808			1.639	3.037	
<b>Total</b>	<b>115.200</b>	<b>21.784</b>	<b>16.246</b>	<b>47.429</b>	<b>15.252</b>	<b>8.736</b>	<b>3.253</b>	<b>14.081</b>	<b>5.321</b>	<b>3.123</b>	<b>20.409</b>	<b>2.224</b>	<b>20.203</b>	<b>4.743</b>	<b>4.539</b>	<b>21</b>	<b>9.574</b>	<b>312.138</b>	
<b>%</b>	<b>36.91%</b>	<b>6.98%</b>	<b>5.20%</b>	<b>15.19%</b>	<b>4.89%</b>	<b>2.80%</b>	<b>1.04%</b>	<b>4.51%</b>	<b>1.70%</b>	<b>1.00%</b>	<b>6.54%</b>	<b>0.71%</b>	<b>6.47%</b>	<b>1.52%</b>	<b>1.45%</b>	<b>0.01%</b>	<b>3.07%</b>	<b>100.00%</b>	

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

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
<b>Mice</b>	137.844	35.904	93.903	3.733	<b>271.384</b>
<b>Rats</b>	63.578	3.768	103.855	251	<b>171.452</b>
<b>Guinea-Pigs</b>	8.518	73	5.227	9	<b>13.827</b>
<b>Hamsters (Syrian)</b>	350		296		<b>646</b>
<b>Hamsters (Chinese)</b>			30		<b>30</b>
<b>Mongolian gerbil</b>			1.546	167	<b>1.713</b>
<b>Other Rodents</b>			8.258		<b>8.258</b>
<b>Rabbits</b>	14.263	10	6.662	87.514	<b>108.449</b>
<b>Cats</b>	147	69	429	18	<b>663</b>
<b>Dogs</b>		272	2.608		<b>2.880</b>
<b>Other carnivores</b>	235	120	142		<b>497</b>
<b>Horses, donkeys &amp; cross-breeds</b>	4		19		<b>23</b>
<b>Pigs</b>	567	2.365	918	35	<b>3.885</b>
<b>Goats</b>			50	5	<b>55</b>
<b>Sheep</b>	52	16	134	74	<b>276</b>
<b>Cattle</b>	466	264	299	13	<b>1.042</b>
<b>Marmoset and tamarins</b>			160		<b>160</b>
<b>Cynomolgus mon- key</b>			2.442		<b>2.442</b>
<b>Other Mammals</b>		63	77	15	<b>155</b>
<b>Domestic fowl</b>	9.308	2.323	192	49	<b>11.872</b>
<b>Other birds</b>		138	1.321		<b>1.459</b>
<b>Reptiles</b>				300	<b>300</b>
<b>Rana</b>			132		<b>132</b>
<b>Other Amphibians</b>			60		<b>60</b>
<b>Zebra fish</b>			16.967		<b>16.967</b>
<b>Other Fish</b>			10.555		<b>10.555</b>
<b>Total</b>	<b>235.332</b>	<b>45.385</b>	<b>256.282</b>	<b>92.183</b>	<b>629.182</b>
<b>%</b>	<b>37.40%</b>	<b>7.21%</b>	<b>40.73%</b>	<b>14.65%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

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		<b>137.844</b>
Rats	4.316		59.262		<b>63.578</b>
Guinea-Pigs	3.603		4.906	9	<b>8.518</b>
Hamsters (Syrian)			350		<b>350</b>
Rabbits	188	6.992	7.042	41	<b>14.263</b>
Cats	50		97		<b>147</b>
Other carnivores	235				<b>235</b>
Horses, donkeys & cross-breeds	0		4		<b>4</b>
Pigs	377		150	40	<b>567</b>
Sheep			52		<b>52</b>
Cattle	34		432		<b>466</b>
Domestic fowl	9.260			48	<b>9.308</b>
<b>Total</b>	<b>43.768</b>	<b>6.992</b>	<b>184.434</b>	<b>138</b>	<b>235.332</b>
<b>%</b>	<b>18.60%</b>	<b>2.97%</b>	<b>78.37%</b>	<b>0.06%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

Table 14: Use of animals in routine production purposes

	Blood based products	Monoclonal antibodies	Other product types	Total
Mice		894	2.839	<b>3.733</b>
Rats		6	245	<b>251</b>
Guinea-Pigs			9	<b>9</b>
Mongolian gerbil			167	<b>167</b>
Rabbits	86.084	16	1.414	<b>87.514</b>
Cats			18	<b>18</b>
Pigs	12		23	<b>35</b>
Goats	5			<b>5</b>
Sheep	61	1	12	<b>74</b>
Cattle			13	<b>13</b>
Other Mammals			15	<b>15</b>
Domestic fowl	24		25	<b>49</b>
Reptiles			300	<b>300</b>
<b>Total</b>	<b>86.186</b>	<b>917</b>	<b>5.080</b>	<b>92.183</b>
<b>%</b>	<b>93.49%</b>	<b>0.99%</b>	<b>5.51%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

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	Neuro-toxicity	Kinetics	Pharmacodynamics	Photo-toxicity	Ecotoxicity	Target animal safety	Eye irritation/corrosion	Other toxicity/safety testing	Total
Mice	2.800		6.091	6.386	1.130	3.297	32			20.957	50.524		280	564		1.842	93.903
Rats	3.460	41	12	13.582	3.923	782	21.866	11.657	90	13.780	33.444	12		60		1.146	103.855
Guinea-Pigs	2		5.008							44	163					10	5.227
Hamsters (Syrian)		31		142						23	100						296
Hamsters (Chinese)						30											30
Mongolian gerbil											1.546						1.546
Other Rodents													5.089	314		2.855	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					276	2.442

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Other Mammals														77				77
Domestic fowl														12			15	165
Other birds	40													21			1.260	
Rana																132		
Other Amphibians																60		
Zebra fish														800			16.167	
Other Fish	2.076															8.371	108	
<b>Total</b>	<b>8.608</b>	<b>894</b>	<b>11.170</b>	<b>22.769</b>	<b>5.053</b>	<b>4.167</b>	<b>22.388</b>	<b>15.019</b>	<b>90</b>	<b>37.692</b>	<b>88.650</b>	<b>12</b>	<b>31.374</b>	<b>1.601</b>	<b>225</b>	<b>6.570</b>	<b>256.282</b>	
<b>%</b>	<b>3.36%</b>	<b>0.35%</b>	<b>4.36%</b>	<b>8.88%</b>	<b>1.97%</b>	<b>1.63%</b>	<b>8.74%</b>	<b>5.86%</b>	<b>0.04%</b>	<b>14.71%</b>	<b>34.59%</b>	<b>0.00%</b>	<b>12.24%</b>	<b>0.62%</b>	<b>0.09%</b>	<b>2.56%</b>	<b>100.00%</b>	

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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

	up to 28 days	29 - 90 days	> 90 days	Total
<b>Mice</b>	5.735	509	142	<b>6.386</b>
<b>Rats</b>	10.119	2.199	1.264	<b>13.582</b>
<b>Hamsters (Syrian)</b>	142			<b>142</b>
<b>Rabbits</b>	228	16	32	<b>276</b>
<b>Dogs</b>	557	107	75	<b>739</b>
<b>Pigs</b>	83	6	52	<b>141</b>
<b>Marmoset and tamarins</b>		6	36	<b>42</b>
<b>Cynomolgus monkey</b>	392	289	780	<b>1.461</b>
<b>Total</b>	<b>17.256</b>	<b>3.132</b>	<b>2.381</b>	<b>22.769</b>
<b>%</b>	<b>75.79%</b>	<b>13.76%</b>	<b>10.46%</b>	<b>100.00%</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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

	LD50. LC50	Other lethal methods	Non lethal methods	Total
<b>Mice</b>	192	117	2.491	<b>2.800</b>
<b>Rats</b>	1.233		2.227	<b>3.460</b>
<b>Guinea-Pigs</b>			2	<b>2</b>
<b>Rabbits</b>			84	<b>84</b>
<b>Dogs</b>			62	<b>62</b>
<b>Carnivores</b>	58			<b>58</b>
<b>Pigs</b>			26	<b>26</b>
<b>Other birds</b>			40	<b>40</b>
<b>Other Fish</b>	2.076			<b>2.076</b>
<b>Total</b>	<b>3.559</b>	<b>117</b>	<b>4.932</b>	<b>8.608</b>
<b>%</b>	<b>41.35%</b>	<b>1.36%</b>	<b>57.30%</b>	<b>100.00%</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

Table 18: Use of animals in ecotoxicity testing methods

	Acute toxicity	Chronic toxicity	Reproductive ecotoxicity	Endocrine activity	Bioaccumulation	Other ecotoxicity	Total
<b>Mice</b>	280						<b>280</b>
<b>Other Rodents</b>						5.089	<b>5.089</b>
<b>Domestic fowl</b>	15						<b>15</b>
<b>Other birds</b>	464		796				<b>1.260</b>
<b>Rana</b>	132						<b>132</b>
<b>Other Amphibians</b>		60					<b>60</b>
<b>Zebra fish</b>	3.486	2.883	847	8.210	591	150	<b>16.167</b>
<b>Other Fish</b>	3.644	3.345		48	1.267	67	<b>8.371</b>
<b>Total</b>	<b>8.021</b>	<b>6.288</b>	<b>1.643</b>	<b>8.258</b>	<b>1.858</b>	<b>5.306</b>	<b>31.374</b>
<b>%</b>	<b>25.57%</b>	<b>20.04%</b>	<b>5.24%</b>	<b>26.32%</b>	<b>5.92%</b>	<b>16.91%</b>	<b>100.00%</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

## 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
<b>Mice</b>	758.240	37.33%	809.548	39.85%	366.475	18.04%	97.075	4.78%	<b>2.031.338</b>
<b>Rats</b>	77.546	23.77%	150.729	46.20%	92.753	28.43%	5.205	1.60%	<b>326.233</b>
<b>Guinea-Pigs</b>	1.576	8.38%	12.016	63.88%	1.765	9.38%	3.452	18.35%	<b>18.809</b>
<b>Hamsters (Syrian)</b>	68	4.83%	1.247	88.50%	93	6.60%	1	0.07%	<b>1.409</b>
<b>Hamsters (Chinese)</b>			30	100.00%					<b>30</b>
<b>Mongolian gerbil</b>	963	18.31%	3.007	57.19%	1.244	23.66%	44	0.84%	<b>5.258</b>
<b>Other Rodents</b>	625	4.66%	12.607	94.10%	151	1.13%	15	0.11%	<b>13.398</b>
<b>Rabbits</b>	1.224	1.10%	108.207	96.86%	1.973	1.77%	314	0.28%	<b>111.718</b>
<b>Cats</b>	17	1.53%	862	77.52%	183	16.46%	50	4.50%	<b>1.112</b>
<b>Dogs</b>	6	0.13%	3.993	88.91%	475	10.58%	17	0.38%	<b>4.491</b>
<b>Ferrets</b>	12	5.06%	190	80.17%	35	14.77%			<b>237</b>
<b>Other carnivores</b>	5	0.73%	327	47.67%	354	51.60%			<b>686</b>
<b>Horses, donkeys &amp; cross-breeds</b>	63	4.13%	1.424	93.38%	38	2.49%			<b>1.525</b>
<b>Pigs</b>	3.146	23.81%	8.566	64.83%	1.407	10.65%	94	0.71%	<b>13.213</b>
<b>Goats</b>	49	5.14%	890	93.39%	11	1.15%	3	0.31%	<b>953</b>
<b>Sheep</b>	204	8.77%	1.104	47.44%	1.004	43.15%	15	0.64%	<b>2.327</b>
<b>Cattle</b>	173	4.17%	3.246	78.22%	670	16.14%	61	1.47%	<b>4.150</b>

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Prosimians			102	100.00%						102
Marmoset and tamarins	12	3.95%	216	71.05%	76	25.00%				304
Cynomolgus monkey	8	0.30%	1.828	68.13%	846	31.53%	1	0.04%		2.683
Rhesus monkey	6	13.33%	12	26.67%	27	60.00%				45
Baboons							6	100.00%		6
Other species of Old World Monkeys (Cercopithecoidea)			1	100.00%						1
Other Mammals	310	19.50%	1.065	66.98%	192	12.08%	23	1.45%		1.590
Domestic fowl	4.672	15.64%	22.586	75.60%	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	4.443	53.97%	3.624	44.02%	165	2.00%				8.232
Other Amphibians	1.300	39.33%	1.898	57.43%	107	3.24%				3.305
Zebra fish	37.733	31.22%	69.518	57.51%	11.923	9.86%	1.704	1.41%		120.878
Other Fish	20.699	25.62%	51.478	63.73%	3.779	4.68%	4.821	5.97%		80.777
Cephalopods	80	100.00%								80
<b>Total</b>	<b>914.420</b>	<b>32.65%</b>	<b>1.282.093</b>	<b>45.79%</b>	<b>489.840</b>	<b>17.49%</b>	<b>113.608</b>	<b>4.07%</b>	<b>2.799.961</b>	

Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (includes re-use)

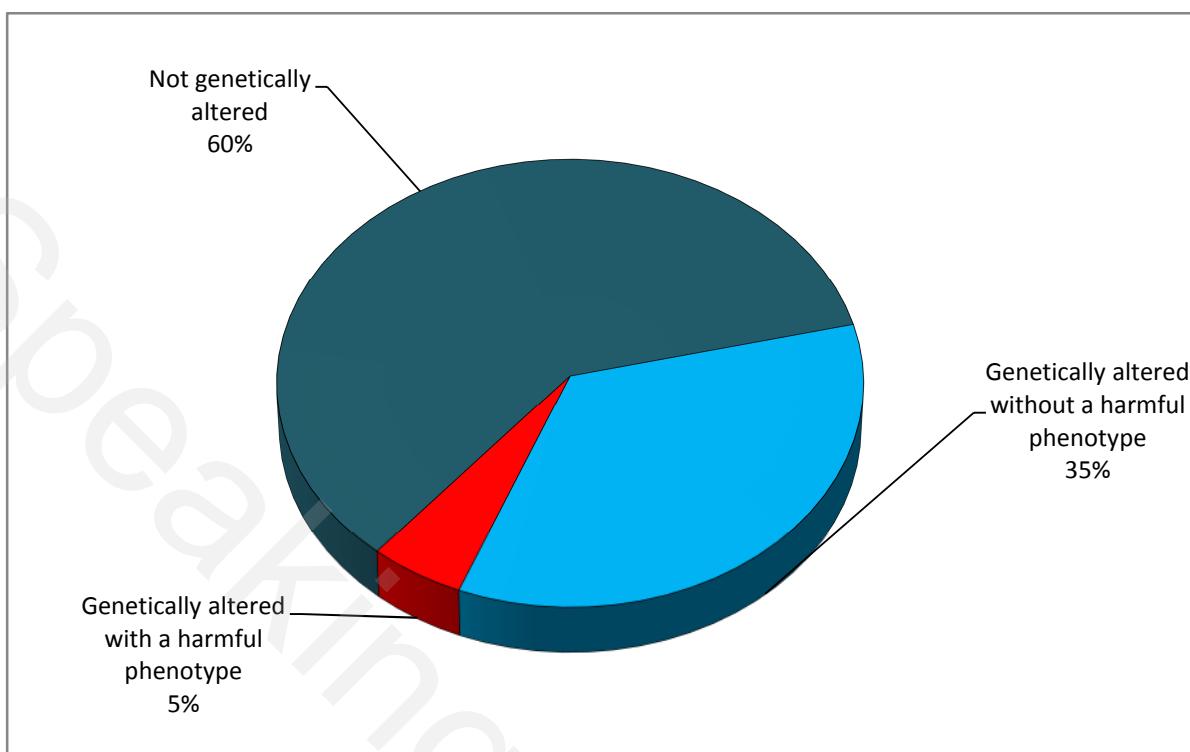
## 6. Use of species and genetic status

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	1.005.176	917.359	108.803	<b>2.031.338</b>
Rats	313.437	9.472	3.324	<b>326.233</b>
Guinea-Pigs	18.809			<b>18.809</b>
Hamsters (Syrian)	1.409			<b>1.409</b>
Hamsters (Chinese)	30			<b>30</b>
Mongolian gerbil	5.258			<b>5.258</b>
Other Rodents	13.398			<b>13.398</b>
Rabbits	111.635		83	<b>111.718</b>
Cats	1.112			<b>1.112</b>
Dogs	4.491			<b>4.491</b>
Ferrets	237			<b>237</b>
Other carnivores	686			<b>686</b>
Horses, donkeys & cross-breeds	1.525			<b>1.525</b>
Pigs	12.935	180	98	<b>13.213</b>
Goats	953			<b>953</b>
Sheep	2.327			<b>2.327</b>
Cattle	4.149	1		<b>4.150</b>
Prosimians	102			<b>102</b>
Marmoset and tamarins	304			<b>304</b>
Cynomolgus monkey	2.683			<b>2.683</b>
Rhesus monkey	45			<b>45</b>
Baboons	6			<b>6</b>
Other species of Old World Monkeys (Cercopithecidae)	1			<b>1</b>
Other Mammals	1.590			<b>1.590</b>
Domestic fowl	29.874			<b>29.874</b>
Other birds	14.297			<b>14.297</b>
Reptiles	757			<b>757</b>
Rana	143			<b>143</b>
Xenopus	8.228	4		<b>8.232</b>
Other Amphibians	3.184	121		<b>3.305</b>
Zebra fish	48.437	70.747	1.694	<b>120.878</b>
Other Fish	76.761	3.410	606	<b>80.777</b>
Cephalopods	80			<b>80</b>
<b>Total</b>	<b>1.684.059</b>	<b>1.001.294</b>	<b>114.608</b>	<b>2.799.961</b>

Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (includes re-use)

Figure 4: Use of animals: genetic status



*Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (includes re-use)*

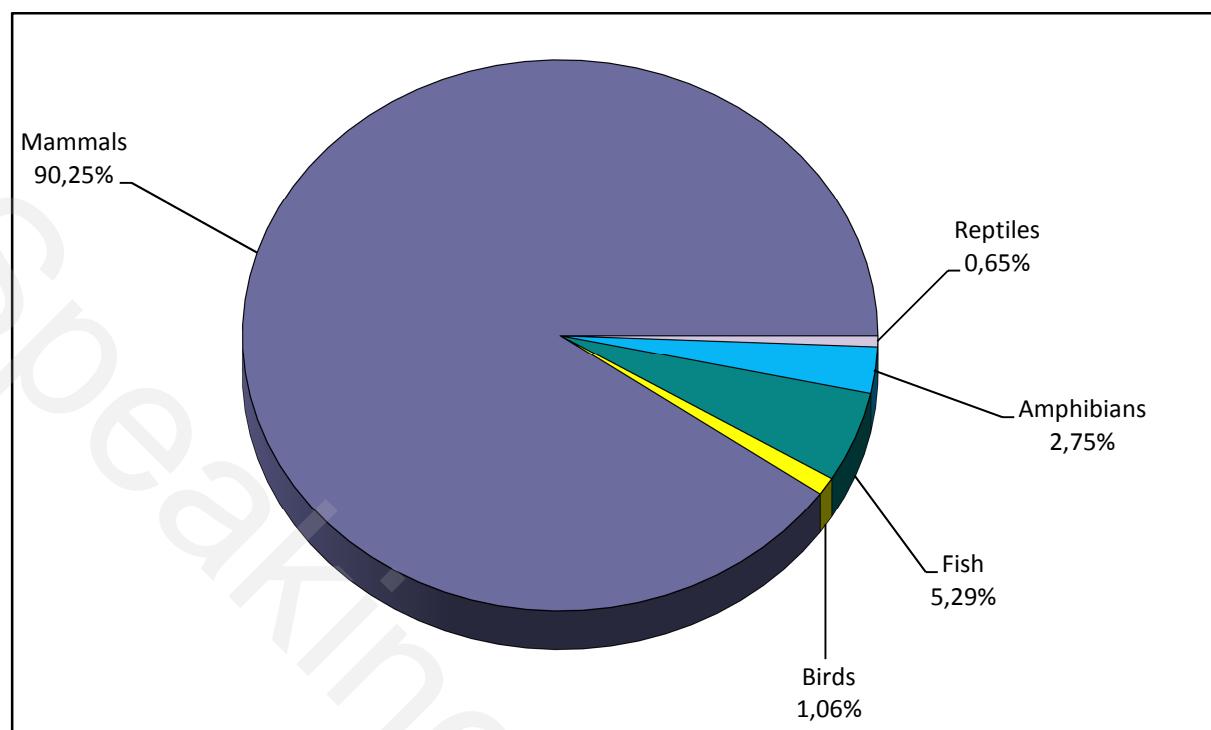
## 7. Use of Species and re-use

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

	(Naive) First use	Re-uses	Total
Mice	2.005.097	26.241	<b>2.031.338</b>
Rats	320.629	5.604	<b>326.233</b>
Guinea-Pigs	18.523	286	<b>18.809</b>
Hamsters (Syrian)	1.403	6	<b>1.409</b>
Hamsters (Chinese)	30		<b>30</b>
Mongolian gerbil	4.883	375	<b>5.258</b>
Other Rodents	13.343	55	<b>13.398</b>
Rabbits	107.652	4.066	<b>111.718</b>
Cats	502	610	<b>1.112</b>
Dogs	2.437	2.054	<b>4.491</b>
Ferrets	207	30	<b>237</b>
Other carnivores	686		<b>686</b>
Horses, donkeys & cross-breeds	1.252	273	<b>1.525</b>
Pigs	12.279	934	<b>13.213</b>
Goats	942	11	<b>953</b>
Sheep	1.719	608	<b>2.327</b>
Cattle	3.762	388	<b>4.150</b>
Prosimians	78	24	<b>102</b>
Marmoset and tamarins	228	76	<b>304</b>
Cynomolgus monkey	2.075	608	<b>2.683</b>
Rhesus monkey	26	19	<b>45</b>
Baboons	6		<b>6</b>
Other species of Old World Monkeys		1	<b>1</b>
Other Mammals	1.523	67	<b>1.590</b>
Domestic fowl	29.703	171	<b>29.874</b>
Other birds	13.970	327	<b>14.297</b>
Reptiles	453	304	<b>757</b>
Rana	143		<b>143</b>
Xenopus	6.943	1.289	<b>8.232</b>
Other Amphibians	3.305		<b>3.305</b>
Zebra fish	118.423	2.455	<b>120.878</b>
Other Fish	80.749	28	<b>80.777</b>
Cephalopods	80		<b>80</b>
<b>Total uses</b>	<b>2.753.051</b>	<b>46.910</b>	<b>2.799.961</b>

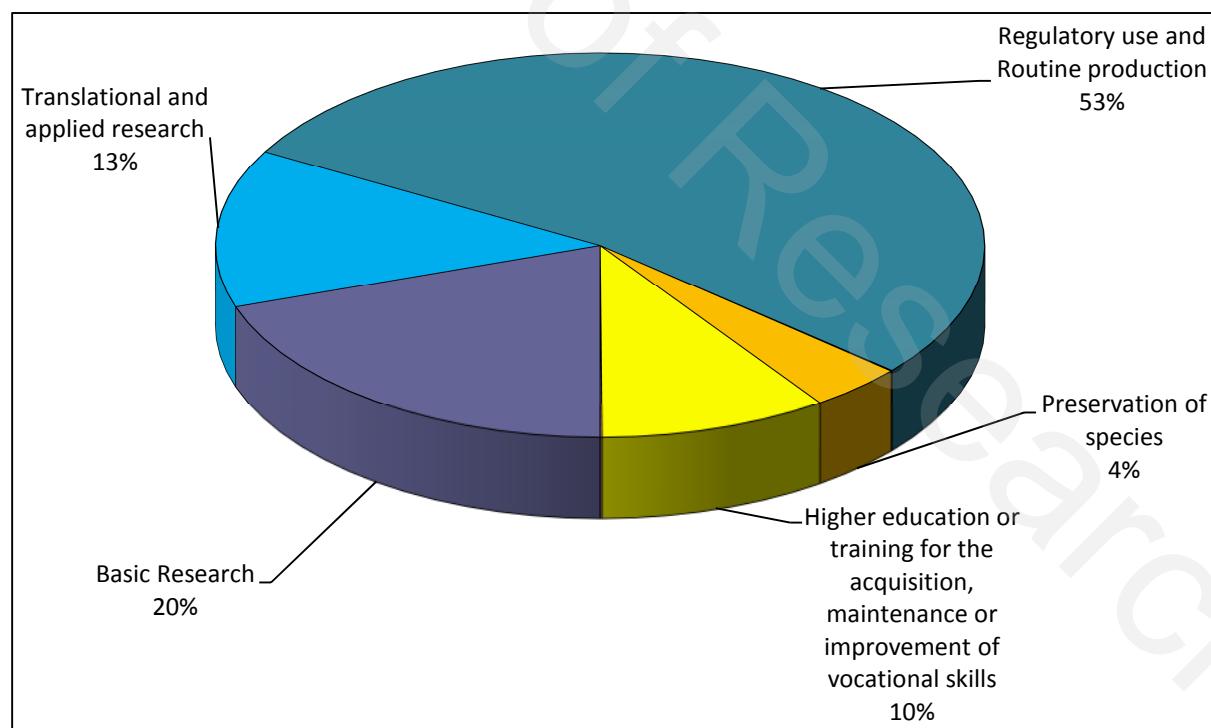
Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (includes re-use)

Figure 5: Use of species groups and re-use



*Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (includes re-use)*

Figure 6: Primary purpose and re-use



*Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (includes re-use)*

## 8. Purposes and severity

Table 22: Purpose and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
<b>Basic Research</b>	118.935	637.679	199.722	19.353	<b>975.689</b>
<b>Translational and applied research</b>	22.878	157.810	122.213	9.237	<b>312.138</b>
<b>Regulatory use and Routine production</b>		408.851	136.431	83.900	<b>629.182</b>
<b>Protection of the natural environment in the interests of the health or welfare of human beings or animals</b>	27	5.234	718	12	<b>5.991</b>
<b>Preservation of species</b>	4.417	24.372	508		<b>29.297</b>
<b>Higher education or training for the acquisition, maintenance or improvement of vocational skills</b>	13.459	24.349	11.484	97	<b>49.389</b>
<b>Forensic enquiries</b>	4	11			<b>15</b>
<b>Maintenance of colonies of established genetically altered animals, not used in other procedures</b>		23.787	18.764	1.009	<b>43.560</b>
<b>Total</b>	<b>159.720</b>	<b>1.282.093</b>	<b>489.840</b>	<b>113.608</b>	<b>2.045.261</b>
<b>%</b>	<b>7.81%</b>	<b>62.69%</b>	<b>23.95%</b>	<b>5.55%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

Table 23: Basic research purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
<b>Oncology</b>	7.090	38.996	33.294	1.782	<b>81.162</b>
<b>Cardiovascular Blood and Lymphatic System</b>	13.907	45.617	19.862	2.166	<b>81.552</b>
<b>Nervous System</b>	20.685	72.947	43.392	3.771	<b>140.795</b>
<b>Respiratory System</b>	2.837	23.522	6.993	260	<b>33.612</b>
<b>Gastrointestinal System including Liver</b>	6.594	12.016	7.846	421	<b>26.877</b>
<b>Musculoskeletal System</b>	3.906	10.255	3.632	275	<b>18.068</b>
<b>Immune System</b>	31.748	168.103	55.902	7.247	<b>263.000</b>
<b>Urogenital/ Reproductive System</b>	5.673	10.882	3.340	195	<b>20.090</b>
<b>Sensory Organs (skin, eyes and ears)</b>	4.479	17.205	3.428	2.503	<b>27.615</b>
<b>Endocrine System/ Metabolism</b>	4.155	30.276	9.244	82	<b>43.757</b>
<b>Multisystemic</b>	2.496	42.330	4.024	173	<b>49.023</b>
<b>Ethology / Animal Behaviour /Animal Biology</b>	185	28.205	3.312	28	<b>31.730</b>
<b>Other basic research</b>	15.180	137.325	5.453	450	<b>158.408</b>
<b>Total</b>	<b>118.935</b>	<b>637.679</b>	<b>199.722</b>	<b>19.353</b>	<b>975.689</b>
<b>%</b>	<b>12.19%</b>	<b>65.36%</b>	<b>20.47%</b>	<b>1.98%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

Table 24: Basic research: species and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe
Mice	104.891	512.275	177.730	16.848
Rats	5.546	15.731	14.480	2.246
Guinea-Pigs	139	421	28	
Hamsters (Syrian)		6		
Mongolian gerbil	247	393	433	1
Other Rodents		2.466	143	
Rabbits	294	718	293	2
Cats	17	60	34	
Dogs		433		
Ferrets	5	32	11	
Other carnivores	5	157	25	
Horses, donkeys & cross-breeds	2	1.230	23	
Pigs	607	1.877	283	4
Goats		70		
Sheep	23	144	134	2
Cattle	12	1.195	134	
Prosimians		102		
Marmoset and tamarins		86	37	
Cynomolgus monkey	3	10	52	
Rhesus monkey			21	
Other Mammals	23	654	177	11
Domestic fowl	182	5.637	225	229
Other birds	306	5.804	1.787	
Reptiles	1	10	139	
Xenopus	170	3.498	153	
Other Amphibians	176	929	45	
Zebra fish	4.469	59.044	3.190	10
Other Fish	1.817	24.697	145	
<b>Total</b>	<b>118.935</b>	<b>637.679</b>	<b>199.722</b>	<b>19.353</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

Table 25: Translational and applied research: purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
<b>Human Cancer</b>	1.385	47.791	64.089	1.935	<b>115.200</b>
<b>Human Infectious Disorders</b>	3.187	11.518	5.917	1.162	<b>21.784</b>
<b>Human Cardiovascular Disorders</b>	4.388	6.891	3.998	969	<b>16.246</b>
<b>Human Nervous and Mental Disorders</b>	4.334	28.319	14.172	604	<b>47.429</b>
<b>Human Respiratory Disorders</b>	991	7.994	5.025	1.242	<b>15.252</b>
<b>Human Gastrointestinal Disorders including Liver</b>	820	5.436	2.388	92	<b>8.736</b>
<b>Human Musculoskeletal Disorders</b>	49	483	2.540	181	<b>3.253</b>
<b>Human Immune Disorders</b>	2.321	5.043	6.645	72	<b>14.081</b>
<b>Human Urogenital/Reproductive Disorders</b>	332	1.065	3.809	115	<b>5.321</b>
<b>Human Sensory Organ Disorders (skin, eyes and ears)</b>	424	1.986	712	1	<b>3.123</b>
<b>Human Endocrine/Metabolism Disorders</b>	1.169	15.713	3.517	10	<b>20.409</b>
<b>Other Human Disorders</b>	335	729	1.151	9	<b>2.224</b>
<b>Animal Diseases and Disorders</b>	439	14.705	3.180	1.879	<b>20.203</b>
<b>Animal Welfare</b>	181	3.560	928	74	<b>4.743</b>
<b>Diagnosis of diseases</b>	1.731	1.097	994	717	<b>4.539</b>
<b>Plant diseases</b>			21		<b>21</b>
<b>Non-regulatory toxicology and ecotoxicology</b>	792	5.480	3.127	175	<b>9.574</b>
<b>Total</b>	<b>22.878</b>	<b>157.810</b>	<b>122.213</b>	<b>9.237</b>	<b>312.138</b>
<b>%</b>	<b>7.00%</b>	<b>50.00%</b>	<b>39.00%</b>	<b>3.00%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

Table 26: Translational and applied research: species and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe
Mice	14.257	110.911	104.659	7.811
Rats	5.765	23.369	11.830	509
Guinea-Pigs	850	1.611	645	309
Hamsters (Syrian)	32	586	36	
Mongolian gerbil		956	706	40
Other Rodents		1.729	1	15
Rabbits	132	193	613	41
Cats		214	82	
Dogs		903	117	2
Ferrets		158	24	
Other carnivores		2		
Horses, donkeys & cross-breeds	35	108	15	
Pigs	750	2.989	340	87
Goats		750	7	
Sheep	39	583	779	12
Cattle	32	980	331	61
Marmoset and tamarins			3	
Cynomolgus monkey		169		
Rhesus monkey		7	6	
Other Old World Monkeys				6
Other Mammals		1		
Domestic fowl	80	76		
Other birds	104	4.693	1.293	265
Rana	20	3.984	4	
Xenopus		69	12	
Other Amphibians		18		
Zebra fish	392	871	8	14
Other Fish	390	1.880	702	65
<b>Total</b>	<b>22.878</b>	<b>157.810</b>	<b>122.213</b>	<b>9.237</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

Table 27: Regulatory use/routine production purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
<b>Routine production</b>		88.347	2.904	932	<b>92.183</b>
<b>Quality control (incl batch safety and potency testing)</b>		119.903	45.518	69.911	<b>235.332</b>
<b>Other efficacy and tolerance testing</b>		20.807	24.100	478	<b>45.385</b>
<b>Toxicity and other safety testing including pharmacology</b>		179.794	63.909	12.579	<b>256.282</b>
<b>Total</b>	<b>0</b>	<b>408.851</b>	<b>136.431</b>	<b>83.900</b>	<b>629.182</b>
<b>%</b>	<b>0.00%</b>	<b>64.98%</b>	<b>21.68%</b>	<b>13.33%</b>	<b>100.00%</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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

	Non-recovery	Mild [up to and including]	Moderate	Severe
<b>Mice</b>		142.464	57.158	71.762
<b>Rats</b>		106.167	63.299	1.986
<b>Guinea-Pigs</b>		9.626	1.058	3.143
<b>Hamsters (Syrian)</b>		588	57	1
<b>Hamsters (Chinese)</b>		30		
<b>Mongolian gerbil</b>		1.635	75	3
<b>Other Rodents</b>		8.251	7	
<b>Rabbits</b>		107.120	1.058	271
<b>Cats</b>		546	67	50
<b>Dogs</b>		2.507	358	15
<b>Other carnivores</b>		168	329	
<b>Horses, donkeys &amp; cross-breeds</b>		23		
<b>Pigs</b>		3.161	721	3
<b>Goats</b>		48	4	3
<b>Sheep</b>		218	57	1
<b>Cattle</b>		837	205	
<b>Marmoset and tamarins</b>		124	36	
<b>Cynomolgus monkey</b>		1.647	794	1
<b>Other Mammals</b>		128	15	12
<b>Domestic fowl</b>		11.268	395	209
<b>Other birds</b>		1.340	115	4
<b>Reptiles</b>		300		
<b>Rana</b>			132	
<b>Other Amphibians</b>			60	
<b>Zebra fish</b>		6.562	8.725	1.680
<b>Other Fish</b>		4.093	1.706	4.756
<b>Total</b>	<b>0</b>	<b>408.851</b>	<b>136.431</b>	<b>83.900</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

Table 29: Quality control purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
<b>Batch safety testing</b>		40.753	2.667	348	<b>43.768</b>
<b>Pyrogenicity testing</b>		6.847	145		<b>6.992</b>
<b>Batch potency testing</b>		72.174	42.706	69.554	<b>184.434</b>
<b>Other quality controls</b>		129		9	<b>138</b>
<b>Total</b>	<b>0</b>	<b>119.903</b>	<b>45.518</b>	<b>69.911</b>	<b>235.332</b>
<b>%</b>	<b>0.00%</b>	<b>50.95%</b>	<b>19.34%</b>	<b>29.71%</b>	<b>100.00%</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

Table 30: Routine production purposes and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
<b>Blood based products</b>		86.155	28	3	<b>86.186</b>
<b>Monoclonal antibodies</b>				917	<b>917</b>
<b>Other product types</b>		2.192	2.876	12	<b>5.080</b>
<b>Total</b>	<b>0</b>	<b>88.347</b>	<b>2.904</b>	<b>932</b>	<b>92.183</b>
<b>%</b>	<b>0.00%</b>	<b>95,84%</b>	<b>3,15%</b>	<b>1,01%</b>	<b>100.00%</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
<b>Acute and sub-acute</b>		4.814	1.417	2.377	<b>8.608</b>
<b>Skin irritati- on/corrosion</b>		855	39		<b>894</b>
<b>Skin sensitisation</b>		10.353	817		<b>11.170</b>
<b>Eye irritati- on/corrosion</b>		117	108		<b>225</b>
<b>Repeated dose toxicity</b>		14.459	7.761	549	<b>22.769</b>
<b>Carcinogenicity</b>		4.068	938	47	<b>5.053</b>
<b>Genotoxicity</b>		4.022	112	33	<b>4.167</b>
<b>Reproductive toxicity</b>		20.378	1.777	233	<b>22.388</b>
<b>Developmental toxicity</b>		14.033	168	818	<b>15.019</b>
<b>Neurotoxicity</b>		90			<b>90</b>
<b>Kinetics</b>		29.201	7.720	771	<b>37.692</b>
<b>Pharmacodynamics (incl safety pharmacology)</b>		52.134	32.338	4.178	<b>88.650</b>
<b>Phototoxicity</b>			12		<b>12</b>
<b>Ecotoxicity</b>		17.135	10.675	3.564	<b>31.374</b>
<b>Target animal safety</b>		1.576	25		<b>1.601</b>
<b>Other toxicity/safety testing</b>		6.559	2	9	<b>6.570</b>
<b>Total</b>	<b>0</b>	<b>179.794</b>	<b>63.909</b>	<b>12.579</b>	<b>256.282</b>
<b>%</b>	<b>0.00%</b>	<b>70.15%</b>	<b>24.94%</b>	<b>4.91%</b>	<b>100%</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

Table 32: Repeated dose toxicity testing methods and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
up to 28 days		10.540	6.198	518	<b>17.256</b>
29 - 90 days		2.755	360	17	<b>3.132</b>
> 90 days		1.164	1.203	14	<b>2.381</b>
<b>Total</b>	<b>0</b>	<b>14.459</b>	<b>7.761</b>	<b>549</b>	<b>22.769</b>
<b>%</b>	<b>0.00%</b>	<b>63.50%</b>	<b>34.09%</b>	<b>2.41%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

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	2.222	<b>3.559</b>
Other lethal methods		91	14	12	<b>117</b>
Non lethal methods		4.407	382	143	<b>4.932</b>
<b>Total</b>	<b>0</b>	<b>4.814</b>	<b>1.417</b>	<b>2.377</b>	<b>8.608</b>
<b>%</b>	<b>0.00%</b>	<b>55.92%</b>	<b>16.46%</b>	<b>27.61%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

Table 34: Ecotoxicity testing methods and severity

	Non-recovery	Mild [up to and including]	Moderate	Severe	Total
Acute toxicity		5.052	586	2.383	<b>8.021</b>
Chronic toxicity		3.425	1.704	1.159	<b>6.288</b>
Reproductive ecotoxicity		1.627		16	<b>1.643</b>
Endocrine activity		720	7.538		<b>8.258</b>
Bioaccumulation		1.012	840	6	<b>1.858</b>
Other ecotoxicity		5.299	7		<b>5.306</b>
<b>Total</b>	<b>0</b>	<b>17.135</b>	<b>10.675</b>	<b>3.564</b>	<b>31.374</b>
<b>%</b>	<b>0.00%</b>	<b>54.62%</b>	<b>34.02%</b>	<b>11.36%</b>	<b>100.00%</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

## 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 tolerance testing	Toxicity and other safety testing includ- ing pharma- cology	Routine pro- duction	Total	%
Legislation on medicinal prod- ucts for human use	211.744	39.422	150.988	39.383	<b>441.537</b>	<b>70.18%</b>
Legislation on medicinal prod- ucts for veterinary use and their resi- dues	22.741	3.572	11.604	262	<b>38.179</b>	<b>6.07%</b>
Medical devices legislation	847	2	9.643	50.764	<b>61.256</b>	<b>9.74%</b>
Industrial chemi- cals legislation			50.563		<b>50.563</b>	<b>8.04%</b>
Plant protection product legislation			31.544		<b>31.544</b>	<b>5.01%</b>
Biocides legisla- tion		859	341		<b>1.200</b>	<b>0.19%</b>
Food legislation including food contact material			38		<b>38</b>	<b>0.01%</b>
Feed legislation including legisla- tion for the safety of target animals. workers and envi- ronment		1.386	252		<b>1.638</b>	<b>0.26%</b>
Other legislation		144	1.309	1.774	<b>3.227</b>	<b>0.51%</b>
<b>Total</b>	<b>235.332</b>	<b>45.385</b>	<b>256.282</b>	<b>92.183</b>	<b>629.182</b>	<b>100.00%</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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	25.744	9	6.431	<b>211.744</b>
Legislation on medicinal products for veterinary use and their residues	4.588	18.024	89	40	<b>22.741</b>
Medical devices legislation	286		40	521	<b>847</b>
Food legislation including food contact material					
Other legislation					
<b>Total</b>	<b>184.434</b>	<b>43.768</b>	<b>138</b>	<b>6.992</b>	<b>235.332</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

Table 37: Routine production purposes: type of legislation

	Blood based products	Monoclonal antibodies	Other product types	Total
Legislation on medicinal products for human use	38.394	416	573	<b>39.383</b>
Legislation on medicinal products for veterinary use and their residues			262	<b>262</b>
Medical devices legislation	47.789	50	2.925	<b>50.764</b>
Other legislation	3	451	1.320	<b>1.774</b>
<b>Total</b>	<b>86.186</b>	<b>917</b>	<b>5.080</b>	<b>92.183</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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		374	1.213	3.110					5.053	
Genotoxicity	660		269	1.978	1.260					4.167	
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	
Pharmacodynamics (incl safety pharmacology)	86.553	2.043	13		29				12	88.650	
Phototoxicity	12									12	
Ecotoxicity	6.835	2.879	294	3.598	16.573	51		252	892	31.374	
Target animal safety	340	947			314					1.601	
Other toxicity/safety testing	1.744	788	130	521	2.855	290			242	6.570	
<b>Total</b>	<b>150.988</b>	<b>11.604</b>	<b>9.643</b>	<b>50.563</b>	<b>31.544</b>	<b>341</b>	<b>38</b>		<b>252</b>	<b>1.309</b>	<b>256.282</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

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	<b>15.013</b>
Legislation on medicinal products for veterinary use and their residues	1679	408	122	<b>2.209</b>
Medical devices legislation	104	194		<b>298</b>
Industrial chemicals legislation	3.084	1.246	24	<b>4.354</b>
Plant protection product legislation	715	140	40	<b>895</b>
<b>Total</b>	<b>17.256</b>	<b>3.132</b>	<b>2.381</b>	<b>22.769</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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	<b>1.019</b>
Legislation on medicinal products for veterinary use and their residues	355			<b>355</b>
Medical devices legislation			2.649	<b>2.649</b>
Industrial chemicals legislation	1.183		992	<b>2.175</b>
Plant protection product legislation	2.010		214	<b>2.224</b>
Food legislation including food contact material		38		<b>38</b>
Other legislation			148	<b>148</b>
<b>Total</b>	<b>3.559</b>	<b>117</b>	<b>4.932</b>	<b>8.608</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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		<b>6.835</b>
Legislation on medicinal products for veterinary use and their residues	30			2.320	529		<b>2.879</b>
Medical devices legislation	294						<b>294</b>
Industrial chemicals legislation	2.648	600	200			150	<b>3.598</b>
Plant protection product legislation	3.898	4.515	1.443	408	1.166	5.143	<b>16.573</b>
Biocides legislation					51		<b>51</b>
Feed legislation including legislation for the safety of target animals, workers and environment	252						<b>252</b>
Other legislation	879					13	<b>892</b>
<b>Total</b>	<b>8.021</b>	<b>6.288</b>	<b>1.643</b>	<b>8.258</b>	<b>1.858</b>	<b>5.306</b>	<b>31.374</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

## 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	220.128	28.810	254.152	90.743	<b>593.833</b>
Legislation satisfying national requirements only [within EU]		16.575	1.383	1.440	<b>19.398</b>
Legislation satisfying Non-EU requirements only	15.204		747		<b>15.951</b>
<b>Total</b>	<b>235.332</b>	<b>45.385</b>	<b>256.282</b>	<b>92.183</b>	<b>629.182</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

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	<b>8.608</b>
Skin irritation/corrosion	872	19	3	<b>894</b>
Skin sensitisation	11.032	15	123	<b>11.170</b>
Eye irritation/corrosion	222		3	<b>225</b>
Repeated dose toxicity	22.697		72	<b>22.769</b>
Carcinogenicity	5.053			<b>5.053</b>
Genotoxicity	4.167			<b>4.167</b>
Reproductive toxicity	22.386		2	<b>22.388</b>
Developmental toxicity	15.019			<b>15.019</b>
Neurotoxicity	90			<b>90</b>
Kinetics	37.650	30	12	<b>37.692</b>
Pharmacodynamics (incl safety pharmacology)	88.229		421	<b>88.650</b>
Phototoxicity	12			<b>12</b>
Ecotoxicity	30.226	1.133	15	<b>31.374</b>
Target animal safety	1.541		60	<b>1.601</b>
Other toxicity/safety testing	6.570			<b>6.570</b>
<b>Total</b>	<b>254.152</b>	<b>1.383</b>	<b>747</b>	<b>256.282</b>

Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)

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	<b>22.697</b>
Legislation satisfying national requirements only [within EU]				
Legislation satisfying Non-EU requirements only	72			<b>72</b>
<b>Total</b>	<b>17.256</b>	<b>3.132</b>	<b>2.381</b>	<b>22.769</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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	<b>8.386</b>
Legislation satisfying national requirements only [within EU]		38	148	<b>186</b>
Legislation satisfying Non-EU requirements only	16		20	<b>36</b>
<b>Total</b>	<b>3.559</b>	<b>117</b>	<b>4.932</b>	<b>8.608</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

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	<b>28.583</b>
Legislation satisfying national requirements only [within EU]	1120				13	<b>1.133</b>
Legislation satisfying Non-EU requirements only	15					<b>15</b>
<b>Total</b>	<b>8.021</b>	<b>6.288</b>	<b>8.258</b>	<b>1.858</b>	<b>5.306</b>	<b>29.731</b>

*Animals used under § 7 (2) of the Animal Protection Act (excludes animals used under § 4 (3) of the Animal Protection Act, includes re-use)*

Table 47: Animals used under § 7 (2) and § 4 (3) of the Animal Protection Act by species

	Animals used under § 7 (2) Animal Protection Act	Animals used under § 4 (3) Animal Protection Act	Total
Mice	1.400.882	630.516	<b>2.031.338</b>
Rats	263.318	62.915	<b>326.233</b>
Guinea-Pigs	18.237	572	<b>18.809</b>
Hamsters (Syrian)	1.390	19	<b>1.409</b>
Hamsters (Chinese)	30		<b>30</b>
Mongolian gerbil	4.568	690	<b>5.258</b>
Other Rodents	12.793	605	<b>13.398</b>
Rabbits	110.988	730	<b>111.718</b>
Cats	1.112		<b>1.112</b>
Dogs	4.491		<b>4.491</b>
Ferrets	230	7	<b>237</b>
Other carnivores	686		<b>686</b>
Horses, donkeys & cross-breeds	1.507	18	<b>1.525</b>
Pigs	12.305	908	<b>13.213</b>
Goats	904	49	<b>953</b>
Sheep	2.290	37	<b>2.327</b>
Cattle	4.029	121	<b>4.150</b>
Prosimians	102		<b>102</b>
Marmoset and tamarins	292	12	<b>304</b>
Cynomolgus monkey	2.678	5	<b>2.683</b>
Rhesus monkey	39	6	<b>45</b>
Baboons	6		<b>6</b>
Other species of Old World Monkeys (Cercopithecidae)	1		<b>1</b>
Other Mammals	1.383	207	<b>1.590</b>
Domestic fowl	25.658	4.216	<b>29.874</b>
Other birds	13.663	634	<b>14.297</b>
Reptiles	501	256	<b>757</b>
Rana	132	11	<b>143</b>
Xenopus	4.038	4.194	<b>8.232</b>
Other Amphibians	2.190	1.115	<b>3305</b>
Zebra fish	88.147	32.731	<b>120.878</b>
Other Fish	66.731	14.046	<b>80.777</b>
Cephalopods		80	<b>80</b>
<b>Total</b>	<b>2.045.261</b>	<b>754.700</b>	<b>2.799.961</b>

Animals used under § 7 (2) or § 4 (3) of the Animal Protection Act (includes re-use)