

Zahlen zu den im Jahr 2020 verwendeten Versuchstieren

Bericht vom 16. Dezember 2021

Seit 2021 melden die zuständigen Behörden gem. § 1 Absatz 2 Versuchstiermeldeverordnung die Zahlen zu den verwendeten Versuchstieren dem Bundesinstitut für Risikobewertung (BfR). Erstmals wurden somit die Daten für das Jahr 2020 an das BfR gemeldet. Das BfR hat diese Daten zusammengestellt und der Europäischen Kommission übermittelt.

Im Vergleich zum Vorjahr sank 2020 die Zahl der in Deutschland in Versuchen verwendeten Tiere um 14 Prozent. Insgesamt wurden knapp 1,9 Millionen Wirbeltiere und Kopffüßer in Tierversuchen nach § 7 Absatz 2 des Tierschutzgesetzes eingesetzt. Das geht aus der Versuchstierstatistik hervor, die in diesem Jahr erstmals vom BfR veröffentlicht wird.

So verringerte sich die Zahl der verwendeten Mäuse von 1.438.336 (2019) auf 1.341.134 (2020), die der Affen und Halbaffen von 3.276 auf 2.031. Bei den Hunden war ebenfalls ein Rückgang von 3.519 (2019) auf 2.560 (2020), bei den Katzen von 954 auf 644 zu verzeichnen. Die Zahl der Fische in Tierversuchen reduzierte sich ebenfalls deutlich von 347.543 (2019) auf 224.883 (2020).

Eine Zusammenfassung und Trendanalyse der Ergebnisse mit grafischer Aufbereitung bietet die BfR-Internetseite unter

http://www.bf3r.de/de/verwendung_von_versuchstieren_im_jahr_2020-288932.html

Im Folgenden veröffentlicht das BfR die aufbereiteten Daten zu den 2020 verwendeten Versuchstieren nach § 7 Absatz 2 des Tierschutzgesetzes, die von den Bundesländern 2021 an das BfR übermittelt wurden.

Versuchstierdaten 2020

Der Bericht erscheint in englischer Sprache, wie er auch an die EU-Kommission übermittelt wurde.

Animals used under §7 (2) of the Animal Protection Act by species

1. Animals used by species

| Table 1: In total animals used by species (excludes re-use) | | |
|---|-------------------|------------|
| Animal species | Number of animals | Percentage |
| Mice | 1306952 | 70.63% |
| Rats | 132832 | 7.18% |
| Guinea-Pigs | 11226 | 0.61% |
| Hamsters (Syrian) | 1984 | 0.11% |
| Hamsters (Chinese) | 24 | 0.00% |
| Mongolian gerbil | 2346 | 0.13% |
| Other rodents | 14548 | 0.79% |
| Rabbits | 69718 | 3.77% |

| | | |
|---|----------------|----------------|
| Cats | 364 | 0.02% |
| Dogs | 1361 | 0.07% |
| Ferrets | 155 | 0.01% |
| Other carnivores | 231 | 0.01% |
| Horses, donkeys & cross-breeds (Equidae) | 2000 | 0.11% |
| Pigs | 19048 | 1.03% |
| Goats | 255 | 0.01% |
| Sheep | 7567 | 0.41% |
| Cattle | 7355 | 0.40% |
| Prosimians | 3 | 0.00% |
| Marmoset and tamarins | 127 | 0.01% |
| Cynomolgus monkey | 1405 | 0.08% |
| Rhesus monkey | 39 | 0.00% |
| Vervets Chlorocebus spp. | 0 | 0.00% |
| Baboons | 6 | 0.00% |
| Squirrel monkey | 0 | 0.00% |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0.00% |
| Other species of New World Monkeys (Ceboidea) | 0 | 0.00% |
| Apes | 0 | 0.00% |
| Other mammals | 1826 | 0.10% |
| Domestic fowl | 17905 | 0.97% |
| Other birds | 10911 | 0.59% |
| Reptiles | 392 | 0.02% |
| Rana | 0 | 0.00% |
| Xenopus | 10486 | 0.57% |
| Other amphibians | 4463 | 0.24% |
| Zebrafish | 140724 | 7.60% |
| Other fish | 84159 | 4.55% |
| Cephalopods | 31 | 0.00% |
| Total uses | 1850443 | 100.00% |

Figure 1: Animals used by species groups (excludes re-use)

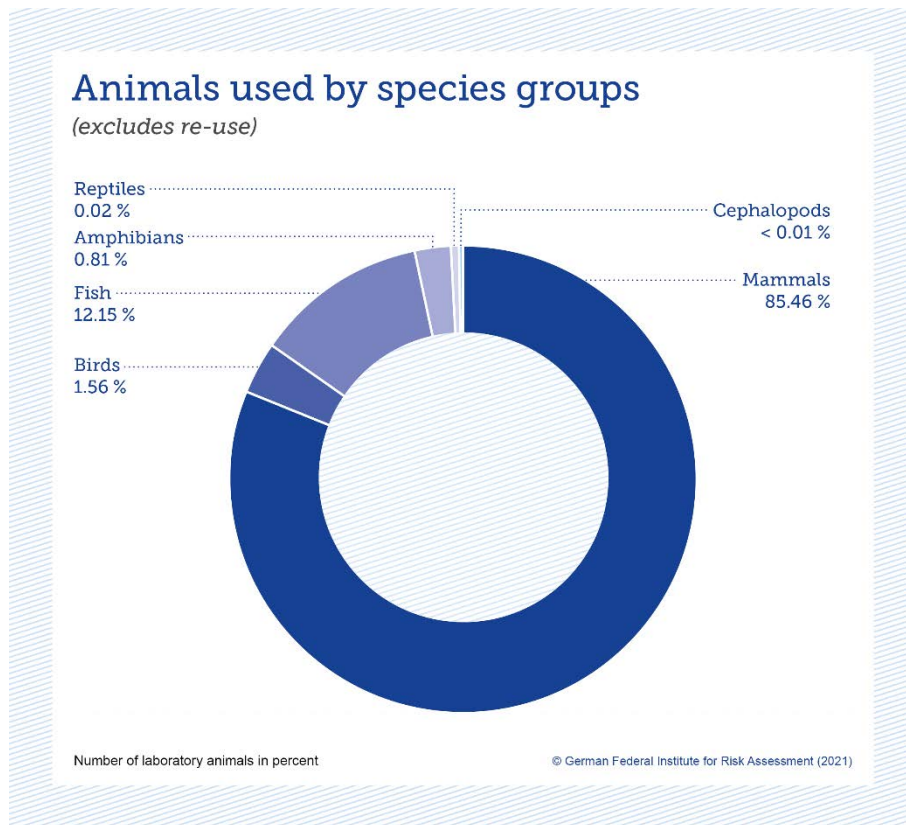


Table 2: Animals used by species groups (excludes re-use)

| Table 2: Animals used by species groups (excludes re-use) | | |
|---|-------------------|----------------|
| Species grouping Level 1 | Number of animals | Percentage |
| Warm-blooded vertebrates | 1610188 | 87.02% |
| Invertebrates | 31 | 0.00% |
| Cold-blooded vertebrates | 240224 | 12.98% |
| Total uses | 1850443 | 100.00% |
| Species grouping Level 2 | Number of animals | Percentage |
| Mammals | 1581372 | 85.46% |
| Birds | 28816 | 1.56% |
| Fish | 224883 | 12.15% |
| Amphibians | 14949 | 0.81% |
| Reptiles | 392 | 0.02% |
| Cephalopods | 31 | 0.00% |

| | | |
|---------------------------|--------------------------|-------------------|
| Total uses | 1850443 | 100.00% |
| | | |
| Mammals | Number of animals | Percentage |
| Rodents | 1469912 | 92.95% |
| Rabbits | 69718 | 4.41% |
| Carnivores | 2111 | 0.13% |
| Equidae | 2000 | 0.13% |
| Artiodactyla | 34225 | 2.16% |
| Non-human primates | 1580 | 0.10% |
| Other mammals | 1826 | 0.12% |
| Total uses | 1581372 | 100.00% |
| | | |
| Non-human primates | Number of animals | Percentage |
| Prosimians | 3 | 0.19% |
| New World Monkeys | 127 | 8.04% |
| Old World Monkey | 1450 | 91.77% |
| Total uses | 1580 | 100.00% |

2. Origin of used Animals

| Animal species | Animals born in ... | | | | Total |
|--|--------------------------------|--|--------------------|-----------------------|---------|
| | the EU at a registered breeder | the EU but not at a registered breeder | the rest of Europe | the rest of the world | |
| Mice | 1293244 | 6368 | 362 | 6978 | 1306952 |
| Rats | 131317 | 376 | 0 | 1139 | 132832 |
| Guinea-Pigs | 11226 | 0 | 0 | 0 | 11226 |
| Hamsters (Syrian) | 1916 | 0 | 0 | 68 | 1984 |
| Hamsters (Chinese) | 24 | 0 | 0 | 0 | 24 |
| Mongolian gerbil | 2131 | 215 | 0 | 0 | 2346 |
| Other rodents | 1216 | 13332 | 0 | 0 | 14548 |
| Rabbits | 68997 | 721 | 0 | 0 | 69718 |
| Cats | 63 | 191 | 0 | 110 | 364 |
| Dogs | 163 | 670 | 18 | 510 | 1361 |
| Ferrets | 97 | 48 | 0 | 10 | 155 |
| Other carnivores | 146 | 84 | 1 | 0 | 231 |
| Horses, donkeys & cross-breeds (Equidae) | 687 | 1313 | 0 | 0 | 2000 |
| Pigs | 11647 | 7367 | 0 | 34 | 19048 |

| | | | | | |
|---|----------------|---------------|------------|--------------|----------------|
| Goats | 131 | 124 | 0 | 0 | 255 |
| Sheep | 6699 | 868 | 0 | 0 | 7567 |
| Cattle | 6132 | 1223 | 0 | 0 | 7355 |
| Prosimians | 3 | 0 | 0 | 0 | 3 |
| Marmoset and tamarins | 127 | 0 | 0 | 0 | 127 |
| Cynomolgus monkey | 21 | 0 | 0 | 1384 | 1405 |
| Rhesus monkey | 35 | 0 | 0 | 4 | 39 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 |
| Baboons | 6 | 0 | 0 | 0 | 6 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 72 | 1748 | 0 | 6 | 1826 |
| Domestic fowl | 10982 | 6923 | 0 | 0 | 17905 |
| Other birds | 3589 | 7087 | 132 | 103 | 10911 |
| Reptiles | 113 | 277 | 0 | 2 | 392 |
| Rana | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 5472 | 4277 | 0 | 737 | 10486 |
| Other amphibians | 2291 | 2172 | 0 | 0 | 4463 |
| Zebrafish | 132609 | 8115 | 0 | 0 | 140724 |
| Other fish | 39273 | 42007 | 441 | 2438 | 84159 |
| Cephalopods | 14 | 17 | 0 | 0 | 31 |
| Total uses | 1730443 | 105523 | 954 | 13523 | 1850443 |

Table 4-6: Origin of used animals by species groups (excludes re-use)

| Species grouping Level 1 | Number of animals born in ... | | | | Total |
|--------------------------|--------------------------------|--|--------------------|-----------------------|----------------|
| | the EU at a registered breeder | the EU but not at a registered breeder | the rest of Europe | the rest of the world | |
| Warm-blooded vertebrates | 1550671 | 48658 | 513 | 10346 | 1610188 |
| Cold-blooded vertebrates | 179758 | 56848 | 441 | 3177 | 240224 |
| Invertebrates | 14 | 17 | 0 | 0 | 31 |
| Total uses | 1730443 | 105523 | 954 | 13523 | 1850443 |

| Species grouping Level 2 | Number of animals born in ... | | | | Total |
|--------------------------|--------------------------------|--|--------------------|-----------------------|----------------|
| | the EU at a registered breeder | the EU but not at a registered breeder | the rest of Europe | the rest of the world | |
| Mammals | 1536100 | 34648 | 381 | 10243 | 1581372 |
| Birds | 14571 | 14010 | 132 | 103 | 28816 |
| Fish | 171882 | 50122 | 441 | 2438 | 224883 |
| Amphibians | 7763 | 6449 | 0 | 737 | 14949 |
| Reptiles | 113 | 277 | 0 | 2 | 392 |
| Cephalopods | 14 | 17 | 0 | 0 | 31 |
| Total uses | 1730443 | 105523 | 954 | 13523 | 1850443 |

| Mammals | Number of animals born in ... | | | | Total |
|--------------------|--------------------------------|--|--------------------|-----------------------|----------------|
| | the EU at a registered breeder | the EU but not at a registered breeder | the rest of Europe | the rest of the world | |
| Rodents | 1441074 | 20291 | 362 | 8185 | 1469912 |
| Rabbits | 68997 | 721 | 0 | 0 | 69718 |
| Carnivores | 469 | 993 | 19 | 630 | 2111 |
| Equidae | 687 | 1313 | 0 | 0 | 2000 |
| Artiodactyla | 24609 | 9582 | 0 | 34 | 34225 |
| Non-human primates | 192 | 0 | 0 | 1388 | 1580 |
| Other mammals | 72 | 1748 | 0 | 6 | 1826 |
| Total uses | 1536100 | 34648 | 381 | 10243 | 1581372 |

3. Non-Human Primates (NHP) by source and generation

| NHP Generation | Number of animals |
|------------------------|--------------------------|
| F0 | 0 |
| F1 | 169 |
| F2 or greater | 1351 |
| Self-sustaining colony | 60 |
| Total uses | 1580 |

| NHP Source (origin) | Number of animals |
|--|--------------------------|
| Animals born at a registered breeder within EU | 192 |
| Animals born in rest of Europe | 0 |
| Animals born in Asia | 790 |
| Animals born in America | 0 |
| Animals born in Africa | 598 |
| Animals born elsewhere | 0 |
| Total uses | 1580 |

4. Use of species in procedures by purpose

| Animal species | 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 | Non-EU Purpose | Total |
|--|----------------|------------------------------------|---------------------------------------|--|-------------------------|---|--------------------|--|----------------|---------|
| Mice | 867572 | 202203 | 124601 | 178 | 1744 | 29428 | 0 | 115408 | 0 | 1341134 |
| Rats | 26338 | 12963 | 90661 | 0 | 0 | 6846 | 0 | 1441 | 0 | 138249 |
| Guinea-Pigs | 550 | 539 | 10158 | 0 | 0 | 118 | 0 | 0 | 0 | 11365 |
| Hamsters (Syrian) | 628 | 1009 | 316 | 0 | 0 | 31 | 0 | 0 | 0 | 1984 |
| Hamsters (Chinese) | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| Mongolian gerbil | 770 | 1395 | 186 | 0 | 0 | 21 | 0 | 0 | 0 | 2372 |
| Other rodents | 4951 | 449 | 9142 | 0 | 0 | 6 | 0 | 0 | 0 | 14548 |
| Rabbits | 1265 | 888 | 68533 | 0 | 0 | 154 | 0 | 0 | 0 | 70840 |
| Cats | 114 | 155 | 333 | 0 | 0 | 42 | 0 | 0 | 0 | 644 |
| Dogs | 230 | 447 | 1587 | 0 | 0 | 296 | 0 | 0 | 0 | 2560 |
| Ferrets | 124 | 29 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 157 |
| Other carnivores | 7 | 14 | 146 | 3 | 61 | 0 | 0 | 0 | 0 | 231 |
| Horses, donkeys & cross-breeds (Equidae) | 864 | 1313 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 2219 |
| Pigs | 6854 | 5220 | 6439 | 468 | 16 | 522 | 0 | 92 | 0 | 19611 |
| Goats | 130 | 75 | 48 | 0 | 0 | 10 | 0 | 0 | 0 | 263 |
| Sheep | 5984 | 812 | 693 | 61 | 0 | 76 | 0 | 0 | 0 | 7626 |

| | | | | | | | | | | |
|---|----------------|---------------|---------------|--------------|--------------|--------------|------------|---------------|------------|----------------|
| Cattle | 2141 | 4170 | 1086 | 0 | 0 | 353 | 0 | 0 | 0 | 7750 |
| Prosimians | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| Marmoset and tamarins | 10 | 8 | 158 | 0 | 0 | 0 | 0 | 0 | 0 | 176 |
| Cynomolgus monkey | 2 | 92 | 1672 | 0 | 0 | 0 | 0 | 0 | 0 | 1766 |
| Rhesus monkey | 14 | 36 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Cebonoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 1358 | 67 | 2 | 43 | 183 | 217 | 0 | 0 | 0 | 1870 |
| Domestic fowl | 8881 | 4972 | 3131 | 1410 | 150 | 194 | 0 | 0 | 0 | 18738 |
| Other birds | 8195 | 457 | 147 | 1472 | 495 | 233 | 0 | 0 | 0 | 10999 |
| Reptiles | 108 | 16 | 0 | 202 | 66 | 3 | 0 | 0 | 0 | 395 |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 3099 | 0 | 8610 | 0 | 0 | 71 | 0 | 0 | 0 | 11780 |
| Other amphibians | 2078 | 0 | 0 | 2172 | 0 | 213 | 0 | 0 | 0 | 4463 |
| Zebrafish | 108018 | 1470 | 25994 | 4080 | 0 | 673 | 0 | 523 | 0 | 140758 |
| Other fish | 46794 | 5743 | 7731 | 5397 | 20865 | 314 | 0 | 394 | 0 | 87238 |
| Cephalopods | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| Total uses | 1097139 | 244572 | 361378 | 15486 | 23580 | 39867 | 0 | 117858 | 0 | 1899880 |
| Percentage (%) | 57.7 | 12.9 | 19.0 | 0.8 | 1.2 | 2.1 | 0.0 | 6.2 | 0.0 | 100.0 |

Figure 2: Use of animals in procedures by purposes

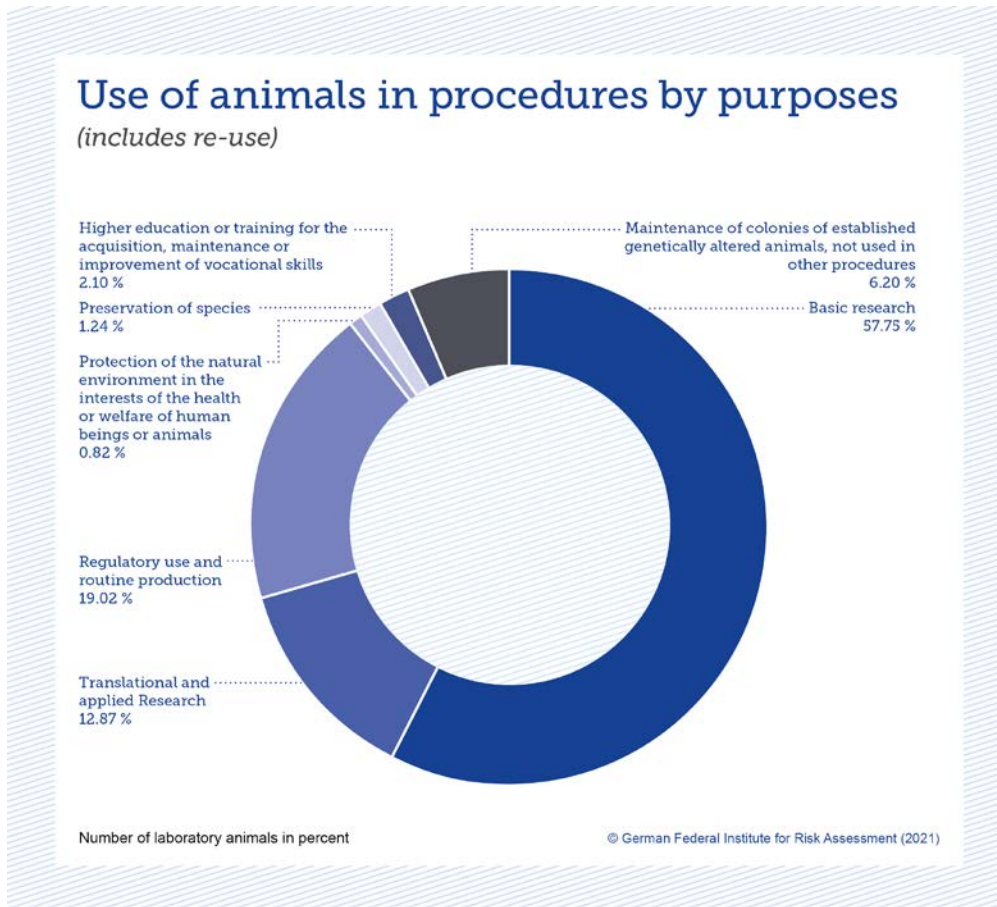


Table 10: Use of species in basic research purposes

| Animal species | Oncology | Cardiovascular 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 | Multi-systemic | Ethology / Animal behaviour / Animal Biology | Other | Total |
|--|----------|---|----------------|--------------------|---|------------------------|---------------|--------------------------------|--------------------------------------|-----------------------------|----------------|--|--------|--------|
| Mice | 96250 | 68729 | 135836 | 15459 | 31675 | 11213 | 177613 | 20580 | 15697 | 45383 | 128671 | 3503 | 116963 | 867572 |
| Rats | 437 | 2886 | 12447 | 627 | 1156 | 525 | 3353 | 646 | 498 | 217 | 2340 | 332 | 874 | 26338 |
| Guinea-Pigs | 8 | 0 | 2 | 0 | 6 | 0 | 0 | 10 | 125 | 0 | 105 | 154 | 140 | 550 |
| Hamsters (Syrian) | 0 | 494 | 92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 6 | 628 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 153 | 0 | 0 | 0 | 214 | 0 | 242 | 0 | 0 | 25 | 136 | 770 |
| Other rodents | 97 | 0 | 221 | 0 | 0 | 1 | 265 | 0 | 3 | 3 | 0 | 1769 | 2592 | 4951 |
| Rabbits | 0 | 76 | 2 | 10 | 0 | 56 | 12 | 6 | 108 | 4 | 24 | 4 | 963 | 1265 |
| Cats | 10 | 0 | 3 | 0 | 16 | 0 | 0 | 24 | 1 | 8 | 34 | 0 | 18 | 114 |
| Dogs | 18 | 0 | 3 | 62 | 27 | 40 | 39 | 27 | 0 | 0 | 7 | 0 | 7 | 230 |
| Ferrets | 0 | 0 | 66 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 48 | 0 | 8 | 124 |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 | 6 | 24 | 47 | 150 | 25 | 28 | 559 | 0 | 25 | 864 |
| Pigs | 8 | 403 | 64 | 110 | 85 | 118 | 199 | 50 | 10 | 32 | 3399 | 571 | 1805 | 6854 |

| | | | | | | | | | | | | | | |
|---|--------------|---------------|---------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|---------------|--------------|---------------|----------------|
| Goats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 9 | 35 | 48 | 130 |
| Sheep | 0 | 12 | 2 | 0 | 0 | 28 | 0 | 0 | 0 | 2 | 5919 | 0 | 21 | 5984 |
| Cattle | 0 | 0 | 0 | 0 | 35 | 10 | 74 | 218 | 0 | 458 | 708 | 187 | 451 | 2141 |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 29 |
| Marmoset and tamarins | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 10 |
| Cynomolgus monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Rhesus monkey | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 13 | 963 | 272 | 1358 |
| Domestic fowl | 0 | 0 | 95 | 0 | 4057 | 0 | 405 | 0 | 152 | 5 | 440 | 2586 | 1141 | 8881 |
| Other birds | 0 | 0 | 136 | 0 | 500 | 0 | 0 | 0 | 15 | 0 | 6 | 7378 | 160 | 8195 |
| Reptiles | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 7 | 32 | 1180 | 30 | 0 | 0 | 0 | 377 | 0 | 28 | 267 | 6 | 1172 | 3099 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 554 | 0 | 0 | 0 | 0 | 37 | 37 | 1450 | 2078 |
| Zebrafish | 585 | 41660 | 32701 | 65 | 0 | 2546 | 5170 | 5234 | 101 | 1791 | 1650 | 2399 | 14116 | 108018 |
| Other fish | 992 | 196 | 327 | 0 | 442 | 20 | 844 | 235 | 556 | 0 | 519 | 35246 | 7417 | 46794 |
| Cephalopods | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| Total uses | 98412 | 114488 | 183537 | 16363 | 38005 | 15135 | 188237 | 27654 | 17533 | 47968 | 144791 | 55231 | 149785 | 1097139 |
| Percentage (%) | 9.0 | 10.4 | 16.7 | 1.5 | 3.5 | 1.4 | 17.2 | 2.5 | 1.6 | 4.4 | 13.2 | 5.0 | 13.7 | 100.0 |

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

| Animal species | 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 | 104594 | 14003 | 9120 | 24393 | 6567 | 7263 | 350 | 14399 | 1396 | 1522 | 11563 | 1349 | 1023 | 828 | 672 | 62 | 3099 | 202203 |
| Rats | 904 | 92 | 1348 | 4413 | 138 | 952 | 352 | 1493 | 263 | 739 | 683 | 151 | 243 | 0 | 6 | 0 | 1186 | 12963 |
| Guinea-Pigs | 0 | 76 | 164 | 0 | 68 | 0 | 0 | 0 | 0 | 159 | 0 | 24 | 48 | 0 | 0 | 0 | 0 | 539 |
| Hamsters (Syrian) | 0 | 629 | 17 | 269 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 1009 |
| Hamsters (Chi- nese) | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| Mongolian gerbil | 0 | 802 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 593 | 0 | 0 | 0 | 0 | 1395 |
| Other Rodents | 0 | 415 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 449 |
| Rabbits | 23 | 139 | 177 | 10 | 0 | 8 | 89 | 165 | 0 | 49 | 28 | 0 | 167 | 0 | 21 | 12 | 0 | 888 |

| | | | | | | | | | | | | | | | | | | |
|---|-----|----|-----|----|----|-----|-----|----|----|----|----|-----|------|------|------|---|----|------|
| Cats | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 143 | 0 | 9 | 0 | 0 | 155 |
| Dogs | 21 | 0 | 14 | 99 | 6 | 6 | 0 | 34 | 0 | 24 | 53 | 0 | 181 | 0 | 9 | 0 | 0 | 447 |
| Ferrets | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 29 |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 14 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1313 | 0 | 0 | 0 | 0 | 1313 |
| Pigs | 160 | 0 | 273 | 59 | 76 | 148 | 420 | 26 | 48 | 28 | 68 | 119 | 863 | 2916 | 7 | 0 | 9 | 5220 |
| Goats | 0 | 7 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 8 | 0 | 0 | 75 |
| Sheep | 0 | 18 | 20 | 3 | 0 | 0 | 31 | 0 | 0 | 7 | 0 | 2 | 152 | 0 | 563 | 0 | 16 | 812 |
| Cattle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 6 | 1597 | 528 | 2013 | 0 | 16 | 4170 |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 8 |
| Cynomolgus monkey | 0 | 0 | 5 | 26 | 0 | 6 | 0 | 0 | 0 | 39 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 92 |
| Rhesus monkey | 2 | 5 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 36 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 52 | 0 | 0 | 0 | 67 |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4131 | 750 | 91 | 0 | 0 | 4972 |

| | | | | | | | | | | | | | | | | | | | |
|-----------------------|---------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|--------------|-------------|-------------|------------|-------------|---------------|------|
| Other birds | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 181 | 216 | 60 | 0 | 0 | 457 |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 16 |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Zebrafish | 0 | 0 | 964 | 0 | 0 | 0 | 0 | 40 | 0 | 111 | 355 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1470 |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5160 | 23 | 0 | 0 | 560 | 5743 |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total uses | 105704 | 16225 | 12127 | 29277 | 6918 | 8388 | 1242 | 16157 | 1717 | 2678 | 12750 | 1680 | 15930 | 5313 | 3475 | 74 | 4917 | 244572 | |
| Percentage (%) | 43.2 | 6.6 | 5.0 | 12.0 | 2.8 | 3.4 | 0.5 | 6.6 | 0.7 | 1.1 | 5.2 | 0.7 | 6.5 | 2.2 | 1.4 | 0.0 | 2.0 | 100.0 | |

Table 12: Regulatory use of animals and routine production purposes

| Animal species | Quality control (incl. batch safety and potency testing) | Other efficacy and tolerance testing | Toxicity and other safety testing including pharmacology | Routine production | Total |
|---|--|--------------------------------------|--|--------------------|--------|
| Mice | 68116 | 9320 | 45317 | 1848 | 124601 |
| Rats | 22588 | 542 | 66767 | 764 | 90661 |
| Guinea-Pigs | 8053 | 26 | 1954 | 125 | 10158 |
| Hamsters (Syrian) | 45 | 45 | 225 | 1 | 316 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 70 | 116 | 186 |
| Other rodents | 0 | 47 | 9095 | 0 | 9142 |
| Rabbits | 3263 | 372 | 7902 | 56996 | 68533 |
| Cats | 0 | 79 | 142 | 112 | 333 |
| Dogs | 0 | 28 | 1204 | 355 | 1587 |
| Ferrets | 0 | 0 | 0 | 0 | 0 |
| Other carnivores | 146 | 0 | 0 | 0 | 146 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 | 0 |
| Pigs | 89 | 615 | 5705 | 30 | 6439 |
| Goats | 0 | 0 | 44 | 4 | 48 |
| Sheep | 33 | 0 | 14 | 646 | 693 |
| Cattle | 334 | 130 | 559 | 63 | 1086 |
| Prosimians | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 158 | 0 | 158 |
| Cynomolgus monkey | 0 | 0 | 1672 | 0 | 1672 |
| Rhesus monkey | 0 | 0 | 4 | 0 | 4 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboloidea) | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 0 | 2 | 2 |
| Domestic fowl | 660 | 110 | 1812 | 549 | 3131 |
| Other birds | 0 | 0 | 142 | 5 | 147 |
| Reptiles | 0 | 0 | 0 | 0 | 0 |
| Rana | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 8610 | 0 | 8610 |
| Other Amphibians | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|-------------------|---------------|--------------|---------------|--------------|---------------|
| Zebrafish | 0 | 0 | 25994 | 0 | 25994 |
| Other fish | 0 | 0 | 7326 | 405 | 7731 |
| Cephalopods | 0 | 0 | 0 | 0 | 0 |
| Total uses | 103327 | 11314 | 184716 | 62021 | 361378 |
| | 28.6% | 3.1% | 51.1% | 17.2% | 100.0% |

Table 13: Use of animals in quality control purposes

| Animal species | Batch safety testing | Pyrogenicity testing | Batch potency testing | Other quality controls | Total |
|---|----------------------|----------------------|-----------------------|------------------------|-------|
| Mice | 23685 | 0 | 44001 | 430 | 68116 |
| Rats | 291 | 0 | 22297 | 0 | 22588 |
| Guinea-Pigs | 912 | 0 | 7141 | 0 | 8053 |
| Hamsters (Syrian) | 0 | 0 | 45 | 0 | 45 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 0 | 0 | 0 |
| Rabbits | 0 | 3223 | 40 | 0 | 3263 |
| Cats | 0 | 0 | 0 | 0 | 0 |
| Dogs | 0 | 0 | 0 | 0 | 0 |
| Ferrets | 0 | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 146 | 0 | 146 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 | 0 |
| Pigs | 59 | 0 | 30 | 0 | 89 |
| Goats | 0 | 0 | 0 | 0 | 0 |
| Sheep | 27 | 0 | 0 | 6 | 33 |
| Cattle | 60 | 0 | 274 | 0 | 334 |
| Prosimians | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 0 | 0 | 0 | 0 | 0 |
| Rhesus monkey | 0 | 0 | 0 | 0 | 0 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 0 | 0 | 0 |
| Domestic fowl | 556 | 0 | 104 | 0 | 660 |
| Other birds | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|-------------------|--------------|-------------|--------------|-------------|---------------|
| Reptiles | 0 | 0 | 0 | 0 | 0 |
| Rana | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 |
| Zebrafish | 0 | 0 | 0 | 0 | 0 |
| Other fish | 0 | 0 | 0 | 0 | 0 |
| Cephalopods | 0 | 0 | 0 | 0 | 0 |
| Total uses | 25590 | 3223 | 74078 | 436 | 103327 |
| | 24.8% | 3.1% | 71.7% | 0.4% | 100.0% |

Table 14: Use of animals in routine production purposes

| Animal species | Blood based products | Monoclonal antibody | Other product types | Total |
|---|----------------------|---------------------|---------------------|---------------|
| Mice | 745 | 1050 | 53 | 1848 |
| Rats | 475 | 1 | 288 | 764 |
| Guinea-Pigs | 121 | 0 | 4 | 125 |
| Hamsters (Syrian) | 1 | 0 | 0 | 1 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 116 | 116 |
| Other rodents | 0 | 0 | 0 | 0 |
| Rabbits | 56230 | 1 | 765 | 56996 |
| Cats | 96 | 0 | 16 | 112 |
| Dogs | 355 | 0 | 0 | 355 |
| Ferrets | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 |
| Pigs | 0 | 0 | 30 | 30 |
| Goats | 0 | 4 | 0 | 4 |
| Sheep | 630 | 0 | 16 | 646 |
| Cattle | 38 | 0 | 25 | 63 |
| Prosimians | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 0 | 0 | 0 | 0 |
| Rhesus monkey | 0 | 0 | 0 | 0 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 2 | 2 |
| Domestic fowl | 5 | 0 | 544 | 549 |
| Other birds | 3 | 0 | 2 | 5 |
| Reptiles | 0 | 0 | 0 | 0 |
| Rana | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 |
| Zebrafish | 0 | 0 | 0 | 0 |
| Other fish | 0 | 0 | 405 | 405 |
| Cephalopods | 0 | 0 | 0 | 0 |
| Total uses | 58699 | 1056 | 2266 | 62021 |
| | 94.6% | 1.7% | 3.7% | 100.0% |

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

| Animal species | Acute and sub-acute toxicity | Skin irritation/corrosion | Skin sensitisation | Eye irritation/corrosion | Repeated dose toxicity | Carcinogenicity | Genotoxicity | Reproductive toxicity | Developmental toxicity | Neurotoxicity | Kinetics | Pharmacodynamics (incl. safety pharmacology) | Phototoxicity | Ecotoxicity | Safety testing in food and feed area | Target animal safety | Other toxicity/safety testing | Total |
|--------------------|------------------------------|---------------------------|--------------------|--------------------------|------------------------|-----------------|--------------|-----------------------|------------------------|---------------|----------|--|---------------|-------------|--------------------------------------|----------------------|-------------------------------|-------|
| Mice | 1703 | 0 | 2441 | 0 | 2004 | 48 | 854 | 0 | 0 | 0 | 8296 | 29469 | 0 | 0 | 4 | 277 | 221 | 45317 |
| Rats | 1878 | 20 | 0 | 0 | 7982 | 37 | 1213 | 22898 | 14371 | 100 | 4243 | 13554 | 0 | 0 | 96 | 0 | 375 | 66767 |
| Guinea-Pigs | 0 | 0 | 1899 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 37 | 0 | 0 | 0 | 0 | 0 | 1954 |
| Hamsters (Syrian) | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 210 | 0 | 0 | 0 | 0 | 0 | 225 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 70 |
| Other Rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 407 | 0 | 1858 | 6830 | 9095 |
| Rabbits | 0 | 268 | 88 | 14 | 118 | 0 | 0 | 395 | 4716 | 0 | 11 | 763 | 0 | 0 | 0 | 30 | 1499 | 7902 |
| Cats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 103 | 0 | 0 | 0 | 0 | 0 | 142 |

| | | | | | | | | | | | | | | | | | | |
|---|-----|---|---|---|------|---|---|---|----|---|-----|-----|---|---|------|------|-----|------|
| Dogs | 107 | 0 | 3 | 0 | 392 | 0 | 0 | 0 | 0 | 0 | 271 | 404 | 0 | 0 | 0 | 27 | 0 | 1204 |
| Ferrets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pigs | 0 | 0 | 0 | 0 | 138 | 0 | 0 | 0 | 0 | 0 | 110 | 243 | 0 | 0 | 120 | 5077 | 17 | 5705 |
| Goats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 42 | 44 |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Cattle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 181 | 66 | 0 | 0 | 0 | 312 | 0 | 559 |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 158 |
| Cynomolgus monkey | 0 | 0 | 0 | 0 | 1178 | 0 | 0 | 0 | 58 | 0 | 240 | 25 | 0 | 0 | 0 | 0 | 171 | 1672 |
| Rhesus monkey | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Cebonoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1812 | 0 | 0 | 1812 |
| Other birds | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 0 | 142 |

| | | | | | | | | | | | | | | | | | | |
|-----------------------|-------------|------------|-------------|------------|--------------|------------|-------------|--------------|--------------|------------|--------------|--------------|------------|--------------|-------------|-------------|-------------|---------------|
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8610 | 0 | 0 | 0 | 8610 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Zebrafish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25994 | 0 | 0 | 0 | 25994 |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7326 | 0 | 0 | 0 | 7326 |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total uses | 3688 | 303 | 4431 | 14 | 11928 | 85 | 2067 | 23293 | 19145 | 100 | 13425 | 44944 | 0 | 42337 | 2174 | 7581 | 9201 | 184716 |
| Percentage (%) | 2.0 | 0.2 | 2.4 | 0.0 | 6.5 | 0.0 | 1.1 | 12.6 | 10.4 | 0.1 | 7.3 | 24.3 | 0.0 | 22.9 | 1.2 | 4.1 | 5.0 | 100.0 |

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

| Animal species | up to 28 days | 29 - 90 days | > 90 days | Total |
|---|---------------|--------------|--------------|---------------|
| Mice | 1417 | 587 | 0 | 2004 |
| Rats | 4510 | 2721 | 751 | 7982 |
| Guinea-Pigs | 0 | 0 | 0 | 0 |
| Hamsters (Syrian) | 0 | 0 | 0 | 0 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 0 | 0 |
| Rabbits | 54 | 64 | 0 | 118 |
| Cats | 0 | 0 | 0 | 0 |
| Dogs | 306 | 78 | 8 | 392 |
| Ferrets | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 |
| Pigs | 94 | 0 | 44 | 138 |
| Goats | 0 | 0 | 0 | 0 |
| Sheep | 0 | 0 | 0 | 0 |
| Cattle | 0 | 0 | 0 | 0 |
| Prosimians | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 56 | 56 | 112 |
| Cynomolgus monkey | 110 | 175 | 893 | 1178 |
| Rhesus monkey | 0 | 0 | 4 | 4 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 0 | 0 |
| Domestic fowl | 0 | 0 | 0 | 0 |
| Other birds | 0 | 0 | 0 | 0 |
| Reptiles | 0 | 0 | 0 | 0 |
| Rana | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 |
| Zebrafish | 0 | 0 | 0 | 0 |
| Other fish | 0 | 0 | 0 | 0 |
| Cephalopods | 0 | 0 | 0 | 0 |
| Total uses | 6491 | 3681 | 1756 | 11928 |
| | 54.4% | 30.9% | 14.7% | 100.0% |

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

| Animal species | LD50, LC50 | Other lethal method | Non lethal method | Total |
|---|---------------|---------------------|-------------------|---------------|
| Mice | 0 | 0 | 1703 | 1703 |
| Rats | 695 | 0 | 1183 | 1878 |
| Guinea-Pigs | 0 | 0 | 0 | 0 |
| Hamsters (Syrian) | 0 | 0 | 0 | 0 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 0 | 0 |
| Rabbits | 0 | 0 | 0 | 0 |
| Cats | 0 | 0 | 0 | 0 |
| Dogs | 0 | 0 | 107 | 107 |
| Ferrets | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 |
| Pigs | 0 | 0 | 0 | 0 |
| Goats | 0 | 0 | 0 | 0 |
| Sheep | 0 | 0 | 0 | 0 |
| Cattle | 0 | 0 | 0 | 0 |
| Prosimians | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 0 | 0 | 0 | 0 |
| Rhesus monkey | 0 | 0 | 0 | 0 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 0 | 0 |
| Domestic fowl | 0 | 0 | 0 | 0 |
| Other birds | 0 | 0 | 0 | 0 |
| Reptiles | 0 | 0 | 0 | 0 |
| Rana | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 |
| Zebrafish | 0 | 0 | 0 | 0 |
| Other fish | 0 | 0 | 0 | 0 |
| Cephalopods | 0 | 0 | 0 | 0 |
| Total uses | 695 | 0 | 2993 | 3688 |
| | 18.8% | 0.0% | 81.2% | 100.0% |

Table 18: Use of animals in ecotoxicity testing methods

| Animal species | Acute toxicity | Chronic toxicity | Reproductive toxicity | Endocrine toxicity | Bioaccumulation | Other | Total |
|---|----------------|------------------|-----------------------|--------------------|-----------------|-------|-------|
| Mice | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rats | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hamsters (Syrian) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hamsters (chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 407 | 407 |
| Rabbits | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cats | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dogs | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ferrets | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Goats | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cattle | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rhesus monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidae) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other birds | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 670 | 0 | 0 | 7940 | 0 | 0 | 8610 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|-------------------|--------------|--------------|-------------|--------------|-------------|-------------|---------------|
| Zebrafish | 2680 | 20643 | 960 | 1200 | 511 | 0 | 25994 |
| Other fish | 3333 | 96 | 368 | 2374 | 1146 | 9 | 7326 |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total uses | 6683 | 20739 | 1328 | 11514 | 1657 | 416 | 42337 |
| | 15.8% | 49.0% | 3.1% | 27.2% | 3.9% | 1.0% | 100.0% |

5. Use of species and severity

Table 19: Use of species and severity in total

| Animal species | Non-recovery | % | Mild (up to and including) | % | Moderate | % | Severe | % | Total |
|--|--------------|-------|----------------------------|--------|----------|-------|--------|-------|---------|
| Mice | 65374 | 4.9% | 818982 | 61.1% | 395378 | 29.5% | 61400 | 4.6% | 1341134 |
| Rats | 7846 | 5.7% | 103117 | 74.6% | 24593 | 17.8% | 2693 | 1.9% | 138249 |
| Guinea-Pigs | 84 | 0.7% | 6111 | 53.8% | 1180 | 10.4% | 3990 | 35.1% | 11365 |
| Hamsters (Syrian) | 92 | 4.6% | 1208 | 60.9% | 683 | 34.4% | 1 | 0.1% | 1984 |
| Hamsters (Chinese) | 0 | 0.0% | 21 | 87.5% | 3 | 12.5% | 0 | 0.0% | 24 |
| Mongolian gerbil | 243 | 10.2% | 832 | 35.1% | 1254 | 52.9% | 43 | 1.8% | 2372 |
| Other rodents | 3 | 0.0% | 13965 | 96.0% | 386 | 2.7% | 194 | 1.3% | 14548 |
| Rabbits | 21315 | 30.1% | 47791 | 67.5% | 1638 | 2.3% | 96 | 0.1% | 70840 |
| Cats | 4 | 0.6% | 529 | 82.1% | 110 | 17.1% | 1 | 0.2% | 644 |
| Dogs | 69 | 2.7% | 2262 | 88.4% | 229 | 8.9% | 0 | 0.0% | 2560 |
| Ferrets | 2 | 1.3% | 123 | 78.3% | 32 | 20.4% | 0 | 0.0% | 157 |
| Other carnivores | 0 | 0.0% | 113 | 48.9% | 118 | 51.1% | 0 | 0.0% | 231 |
| Horses, donkeys & cross-breeds (Equidae) | 5 | 0.2% | 2208 | 99.5% | 6 | 0.3% | 0 | 0.0% | 2219 |
| Pigs | 1567 | 8.0% | 15814 | 80.6% | 1726 | 8.8% | 504 | 2.6% | 19611 |
| Goats | 0 | 0.0% | 253 | 96.2% | 7 | 2.7% | 3 | 1.1% | 263 |
| Sheep | 37 | 0.5% | 6899 | 90.5% | 641 | 8.4% | 49 | 0.6% | 7626 |
| Cattle | 21 | 0.3% | 6907 | 89.1% | 818 | 10.6% | 4 | 0.1% | 7750 |
| Prosimians | 0 | 0.0% | 29 | 100.0% | 0 | 0.0% | 0 | 0.0% | 29 |

| | | | | | | | | | |
|---|---------------|-------|----------------|-------|---------------|-------|--------------|-------|----------------|
| Marmoset and tamarins | 0 | 0.0% | 49 | 27.8% | 127 | 72.2% | 0 | 0.0% | 176 |
| Cynomolgus monkey | 0 | 0.0% | 543 | 30.7% | 1223 | 69.3% | 0 | 0.0% | 1766 |
| Rhesus monkey | 0 | 0.0% | 13 | 24.1% | 41 | 75.9% | 0 | 0.0% | 54 |
| Vervets Chlorocebus spp. | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 |
| Baboons | 0 | 0.0% | 0 | 0.0% | 4 | 66.7% | 2 | 33.3% | 6 |
| Squirrel monkey | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 |
| Other species of New World Monkeys (Ceboidae) | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 |
| Apes | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 |
| Other mammals | 11 | 0.6% | 1735 | 92.8% | 96 | 5.1% | 28 | 1.5% | 1870 |
| Domestic fowl | 273 | 1.5% | 16105 | 85.9% | 2159 | 11.5% | 201 | 1.1% | 18738 |
| Other birds | 1400 | 12.7% | 8810 | 80.1% | 729 | 6.6% | 60 | 0.5% | 10999 |
| Reptiles | 0 | 0.0% | 287 | 72.7% | 108 | 27.3% | 0 | 0.0% | 395 |
| Rana | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 |
| Xenopus | 126 | 1.1% | 11280 | 95.8% | 247 | 2.1% | 127 | 1.1% | 11780 |
| Other amphibians | 353 | 7.9% | 3715 | 83.2% | 395 | 8.9% | 0 | 0.0% | 4463 |
| Zebrafish | 2405 | 1.7% | 121701 | 86.5% | 14822 | 10.5% | 1830 | 1.3% | 140758 |
| Other fish | 4999 | 5.7% | 79188 | 90.8% | 2169 | 2.5% | 882 | 1.0% | 87238 |
| Cephalopods | 11 | 35.5% | 17 | 54.8% | 2 | 6.5% | 1 | 3.2% | 31 |
| Total uses | 106240 | | 1270607 | | 450924 | | 72109 | | 1899880 |
| | 5.6% | | 66.9% | | 23.7% | | 3.8% | | 100.0% |

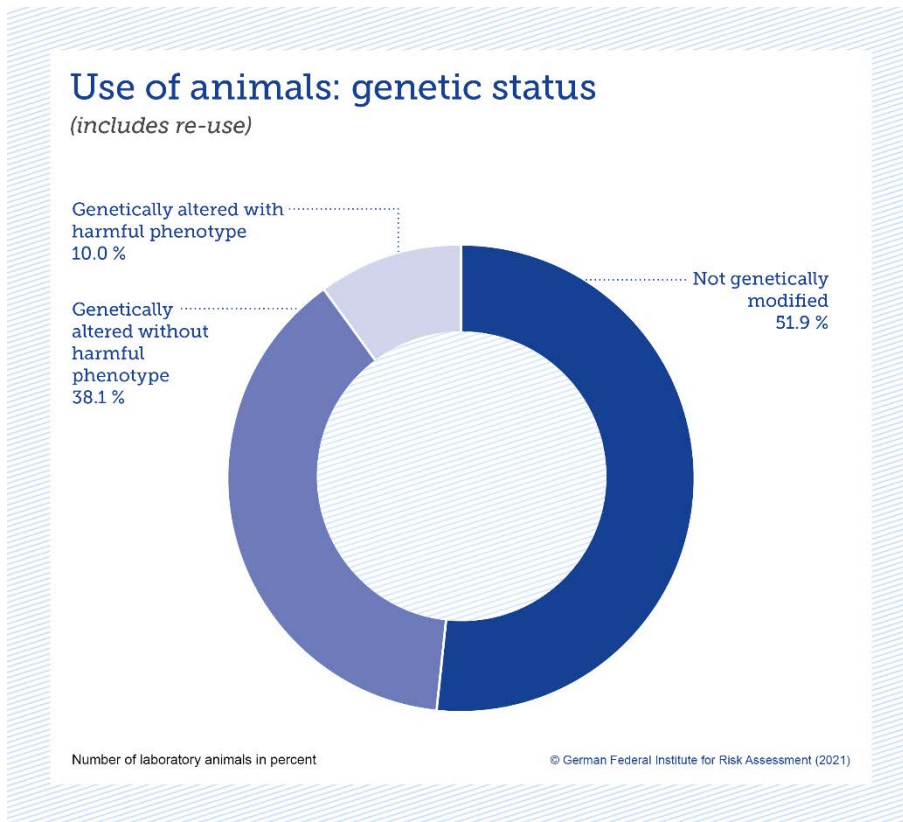
6. Use of species and genetic status

Table 20: Use of species and genetic status in total

| Animal species | Not genetically modified | Genetically altered without harmful phenotype | Genetically altered with harmful phenotype | Total |
|---|--------------------------|---|--|---------|
| Mice | 531652 | 624873 | 184609 | 1341134 |
| Rats | 129997 | 5755 | 2497 | 138249 |
| Guinea-Pigs | 11365 | 0 | 0 | 11365 |
| Hamsters (Syrian) | 1984 | 0 | 0 | 1984 |
| Hamsters (Chinese) | 24 | 0 | 0 | 24 |
| Mongolian gerbil | 2372 | 0 | 0 | 2372 |
| Other rodents | 14548 | 0 | 0 | 14548 |
| Rabbits | 70765 | 75 | 0 | 70840 |
| Cats | 644 | 0 | 0 | 644 |
| Dogs | 2560 | 0 | 0 | 2560 |
| Ferrets | 118 | 39 | 0 | 157 |
| Other carnivores | 231 | 0 | 0 | 231 |
| Horses, donkeys & cross-breeds (Equidae) | 2219 | 0 | 0 | 2219 |
| Pigs | 19006 | 374 | 231 | 19611 |
| Goats | 263 | 0 | 0 | 263 |
| Sheep | 7626 | 0 | 0 | 7626 |
| Cattle | 7749 | 0 | 1 | 7750 |
| Prosimians | 29 | 0 | 0 | 29 |
| Marmoset and tamarins | 176 | 0 | 0 | 176 |
| Cynomolgus monkey | 1766 | 0 | 0 | 1766 |
| Rhesus monkey | 54 | 0 | 0 | 54 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 |
| Baboons | 6 | 0 | 0 | 6 |
| Squirrel monkey | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 |
| Other mammals | 1870 | 0 | 0 | 1870 |
| Domestic fowl | 18417 | 302 | 19 | 18738 |
| Other birds | 10987 | 12 | 0 | 10999 |
| Reptiles | 395 | 0 | 0 | 395 |
| Rana | 0 | 0 | 0 | 0 |
| Xenopus | 10994 | 744 | 42 | 11780 |
| Other amphibians | 2667 | 1796 | 0 | 4463 |
| Zebrafish | 50802 | 86830 | 3126 | 140758 |

| | | | | |
|-------------------|---------------|---------------|---------------|----------------|
| Other fish | 84851 | 2387 | 0 | 87238 |
| Cephalopods | 31 | 0 | 0 | 31 |
| Total uses | 986168 | 723187 | 190525 | 1899880 |
| | 51.9% | 38.1% | 10.0% | 100.0% |

Figure 3: Use of animals: genetic status



7. Use of species and re-use

| Animal species | First use | Re-uses | Total |
|---|-----------|---------|---------|
| Mice | 1306952 | 34182 | 1341134 |
| Rats | 132832 | 5417 | 138249 |
| Guinea-Pigs | 11226 | 139 | 11365 |
| Hamsters (Syrian) | 1984 | 0 | 1984 |
| Hamsters (Chinese) | 24 | 0 | 24 |
| Mongolian gerbil | 2346 | 26 | 2372 |
| Other rodents | 14548 | 0 | 14548 |
| Rabbits | 69718 | 1122 | 70840 |
| Cats | 364 | 280 | 644 |
| Dogs | 1361 | 1199 | 2560 |
| Ferrets | 155 | 2 | 157 |
| Other carnivores | 231 | 0 | 231 |
| Horses, donkeys & cross-breeds (Equidae) | 2000 | 219 | 2219 |
| Pigs | 19048 | 563 | 19611 |
| Goats | 255 | 8 | 263 |
| Sheep | 7567 | 59 | 7626 |
| Cattle | 7355 | 395 | 7750 |
| Prosimians | 3 | 26 | 29 |
| Marmoset and tamarins | 127 | 49 | 176 |
| Cynomolgus monkey | 1405 | 361 | 1766 |
| Rhesus monkey | 39 | 15 | 54 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 |
| Baboons | 6 | 0 | 6 |
| Squirrel monkey | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidea) | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 |
| Other mammals | 1826 | 44 | 1870 |
| Domestic fowl | 17905 | 833 | 18738 |
| Other birds | 10911 | 88 | 10999 |
| Reptiles | 392 | 3 | 395 |
| Rana | 0 | 0 | 0 |
| Xenopus | 10486 | 1294 | 11780 |
| Other amphibians | 4463 | 0 | 4463 |
| Zebrafish | 140724 | 34 | 140758 |
| Other fish | 84159 | 3079 | 87238 |

| | | | |
|-------------------|----------------|--------------|----------------|
| Cephalopods | 31 | 0 | 31 |
| Total uses | 1850443 | 49437 | 1899880 |
| | 97.4% | 2.6% | 100.0% |

Figure 4: Use of species groups of re-used animals

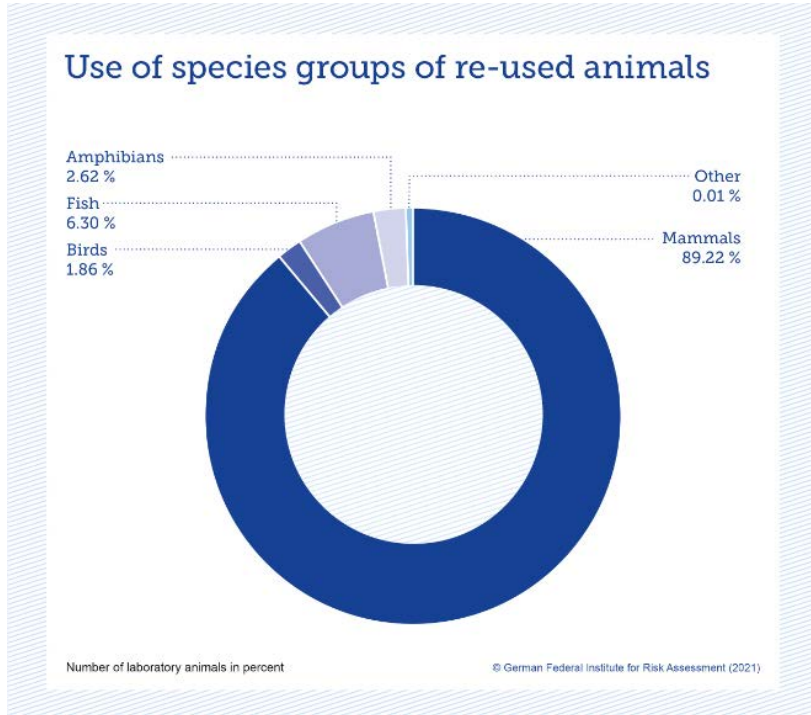
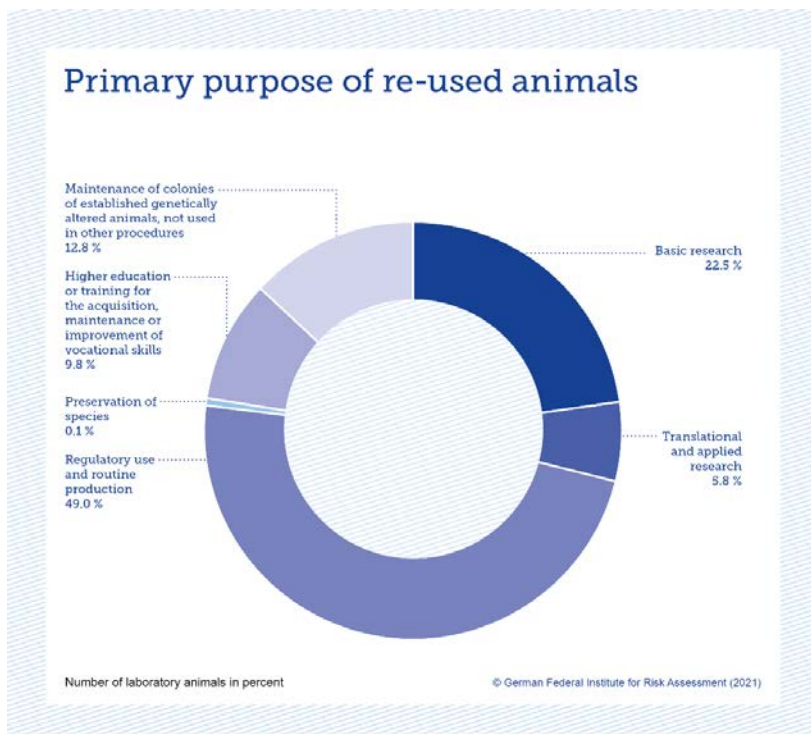


Figure 5: Primary purpose of re-used animals



8. Purposes and severity

| Purposes | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|--|---------------|----------------------------|---------------|--------------|----------------|
| Basic Research | 61011 | 750658 | 265984 | 19486 | 1097139 |
| Translational and applied research | 10869 | 109972 | 117970 | 5761 | 244572 |
| Regulatory use and Routine production | 24014 | 252741 | 46871 | 37752 | 361378 |
| Protection of the natural environment in the interests of the health or welfare of human beings or animals | 1431 | 13029 | 677 | 349 | 15486 |
| Preservation of species | 350 | 23075 | 155 | 0 | 23580 |
| Higher education or training for the acquisition, maintenance or improvement of vocational skills | 7235 | 21178 | 11176 | 278 | 39867 |
| Forensic enquiries | 0 | 0 | 0 | 0 | 0 |
| Maintenance of colonies of established genetically altered animals, not used in other procedures | 1330 | 99954 | 8091 | 8483 | 117858 |
| Total uses | 106240 | 1270607 | 450924 | 72109 | 1899880 |
| | 5.6% | 66.9% | 23.7% | 3.8% | 100.0% |

| Purposes | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|---|--------------|----------------------------|---------------|--------------|----------------|
| Oncology | 6158 | 38075 | 51542 | 2637 | 98412 |
| Cardiovascular Blood and Lymphatic System | 5746 | 74311 | 32095 | 2336 | 114488 |
| Nervous System | 15991 | 104642 | 57355 | 5549 | 183537 |
| Respiratory System | 1079 | 10728 | 3924 | 632 | 16363 |
| Gastrointestinal System including Liver | 2683 | 23990 | 10709 | 623 | 38005 |
| Musculoskeletal System | 663 | 9567 | 4803 | 102 | 15135 |
| Immune System | 6899 | 126588 | 49878 | 4872 | 188237 |
| Urogenital/Reproductive System | 3654 | 19238 | 4626 | 136 | 27654 |
| Sensory Organs (skin, eyes and ears) | 3755 | 9379 | 3584 | 815 | 17533 |
| Endocrine System/Metabolism | 1665 | 32211 | 13825 | 267 | 47968 |
| Multisystemic | 4492 | 124152 | 15197 | 950 | 144791 |
| Ethology / Animal Behaviour /Animal Biology | 1399 | 51148 | 2613 | 71 | 55231 |
| Other | 6827 | 126629 | 15833 | 496 | 149785 |
| Total uses | 61011 | 750658 | 265984 | 19486 | 1097139 |
| | 5.6% | 68.4% | 24.2% | 1.8% | 100.0% |

Table 24: Basic research: species and severity

| Animal species | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|---|--------------|----------------------------|----------|--------|--------|
| Mice | 51224 | 552032 | 246541 | 17775 | 867572 |
| Rats | 2381 | 13688 | 8974 | 1295 | 26338 |
| Guinea-Pigs | 36 | 345 | 169 | 0 | 550 |
| Hamsters (Syrian) | 0 | 480 | 147 | 1 | 628 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 58 | 348 | 360 | 4 | 770 |
| Other rodents | 3 | 4611 | 190 | 147 | 4951 |
| Rabbits | 18 | 1051 | 190 | 6 | 1265 |
| Cats | 4 | 65 | 45 | 0 | 114 |
| Dogs | 0 | 212 | 18 | 0 | 230 |
| Ferrets | 2 | 91 | 31 | 0 | 124 |
| Other carnivores | 0 | 7 | 0 | 0 | 7 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 858 | 6 | 0 | 864 |
| Pigs | 412 | 6035 | 334 | 73 | 6854 |
| Goats | 0 | 130 | 0 | 0 | 130 |
| Sheep | 6 | 5941 | 37 | 0 | 5984 |
| Cattle | 20 | 1700 | 421 | 0 | 2141 |
| Prosimians | 0 | 29 | 0 | 0 | 29 |
| Marmoset and tamarins | 0 | 0 | 10 | 0 | 10 |
| Cynomolgus monkey | 0 | 1 | 1 | 0 | 2 |
| Rhesus monkey | 0 | 0 | 14 | 0 | 14 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Cebonoidea) | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 11 | 1239 | 80 | 28 | 1358 |
| Domestic fowl | 95 | 7527 | 1240 | 19 | 8881 |
| Other birds | 123 | 7523 | 549 | 0 | 8195 |
| Reptiles | 0 | 0 | 108 | 0 | 108 |
| Rana | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 117 | 2811 | 164 | 7 | 3099 |
| Other amphibians | 352 | 1385 | 341 | 0 | 2078 |
| Zebrafish | 2250 | 100310 | 5335 | 123 | 108018 |

| | | | | | |
|-------------------|--------------|---------------|---------------|--------------|----------------|
| Other fish | 3888 | 42222 | 677 | 7 | 46794 |
| Cephalopods | 11 | 17 | 2 | 1 | 31 |
| Total uses | 61011 | 750658 | 265984 | 19486 | 1097139 |
| | 5.6% | 68.4% | 24.2% | 1.8% | 100.0% |

Table 25: Translational and applied research: purposes and severity

| Purposes | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|---|--------------|----------------------------|---------------|-------------|---------------|
| Human Cancer | 2172 | 30768 | 71236 | 1528 | 105704 |
| Human Infectious Disorders | 727 | 8374 | 6533 | 591 | 16225 |
| Human Cardiovascular Disorders | 2679 | 6801 | 2435 | 212 | 12127 |
| Human Nervous and Mental Disorders | 2827 | 12327 | 13936 | 187 | 29277 |
| Human Respiratory Disorders | 148 | 5464 | 700 | 606 | 6918 |
| Human Gastrointestinal Disorders including Liver | 119 | 2427 | 5647 | 195 | 8388 |
| Human Musculoskeletal Disorders | 324 | 336 | 557 | 25 | 1242 |
| Human Immune Disorders | 454 | 7455 | 6887 | 1361 | 16157 |
| Human Urogenital/Reproductive Disorders | 78 | 960 | 658 | 21 | 1717 |
| Human Sensory Organ Disorders (skin, eyes and ears) | 151 | 1546 | 965 | 16 | 2678 |
| Human Endocrine/Metabolism Disorders | 184 | 11565 | 818 | 183 | 12750 |
| Other Human Disorders | 129 | 446 | 879 | 226 | 1680 |
| Animal Diseases and Disorders | 390 | 13067 | 1995 | 478 | 15930 |
| Animal Welfare | 322 | 4728 | 249 | 14 | 5313 |
| Diagnosis of diseases | 0 | 2376 | 985 | 114 | 3475 |
| Plant diseases | 0 | 74 | 0 | 0 | 74 |
| Non-regulatory toxicology and ecotoxicology | 165 | 1258 | 3490 | 4 | 4917 |
| Total uses | 10869 | 109972 | 117970 | 5761 | 244572 |
| | 4.4% | 45.0% | 48.2% | 2.4% | 100.0% |

Table 26: Translational and applied research: species and severity

| Animal species | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|--------------------|--------------|----------------------------|----------|--------|--------|
| Mice | 7384 | 81571 | 108290 | 4958 | 202203 |
| Rats | 2068 | 5593 | 5126 | 176 | 12963 |
| Guinea-Pigs | 43 | 171 | 178 | 147 | 539 |
| Hamsters (Syrian) | 81 | 392 | 536 | 0 | 1009 |
| Hamsters (Chinese) | 0 | 21 | 3 | 0 | 24 |
| Mongolian gerbil | 184 | 405 | 767 | 39 | 1395 |
| Other rodents | 0 | 308 | 141 | 0 | 449 |

| | | | | | |
|---|--------------|---------------|---------------|-------------|---------------|
| Rabbits | 107 | 535 | 212 | 34 | 888 |
| Cats | 0 | 140 | 14 | 1 | 155 |
| Dogs | 0 | 444 | 3 | 0 | 447 |
| Ferrets | 0 | 28 | 1 | 0 | 29 |
| Other carnivores | 0 | 14 | 0 | 0 | 14 |
| Horses, donkeys & cross-breeds (Equidae) | 5 | 1308 | 0 | 0 | 1313 |
| Pigs | 674 | 3781 | 653 | 112 | 5220 |
| Goats | 0 | 67 | 5 | 3 | 75 |
| Sheep | 20 | 144 | 599 | 49 | 812 |
| Cattle | 1 | 3901 | 264 | 4 | 4170 |
| Prosimians | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 3 | 5 | 0 | 8 |
| Cynomolgus monkey | 0 | 68 | 24 | 0 | 92 |
| Rhesus monkey | 0 | 13 | 23 | 0 | 36 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 4 | 2 | 6 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Cebonoidea) | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 53 | 14 | 0 | 67 |
| Domestic fowl | 0 | 3900 | 896 | 176 | 4972 |
| Other birds | 0 | 370 | 27 | 60 | 457 |
| Reptiles | 0 | 16 | 0 | 0 | 16 |
| Rana | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 |
| Zebrafish | 0 | 1470 | 0 | 0 | 1470 |
| Other fish | 302 | 5256 | 185 | 0 | 5743 |
| Cephalopods | 0 | 0 | 0 | 0 | 0 |
| Total uses | 10869 | 109972 | 117970 | 5761 | 244572 |
| | 4.4% | 45.0% | 48.2% | 2.4% | 100.0% |

Table 27: Regulatory use/routine production: purposes and severity

| Purposes | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|--|--------------|----------------------------|--------------|--------------|---------------|
| Routine production | 20781 | 40195 | 1045 | 0 | 62021 |
| Quality control (incl. batch safety and potency testing) | 85 | 65606 | 4114 | 33522 | 103327 |
| Other efficacy and tolerance testing | 230 | 2935 | 7686 | 463 | 11314 |
| Toxicity and other safety testing including pharmacology | 2918 | 144005 | 34026 | 3767 | 184716 |
| Total uses | 24014 | 252741 | 46871 | 37752 | 361378 |
| | 6.6% | 69.9% | 13.0% | 10.4% | 100.0% |

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

| Animal species | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|--|--------------|----------------------------|----------|--------|--------|
| Mice | 1250 | 70255 | 22853 | 30243 | 124601 |
| Rats | 1185 | 79345 | 9238 | 893 | 90661 |
| Guinea-Pigs | 0 | 5489 | 827 | 3842 | 10158 |
| Hamsters (Syrian) | 1 | 315 | 0 | 0 | 316 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 64 | 122 | 0 | 186 |
| Other rodents | 0 | 9040 | 55 | 47 | 9142 |
| Rabbits | 21149 | 46103 | 1225 | 56 | 68533 |
| Cats | 0 | 282 | 51 | 0 | 333 |
| Dogs | 69 | 1310 | 208 | 0 | 1587 |
| Ferrets | 0 | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 28 | 118 | 0 | 146 |
| Horses, donkeys & cross-breeds (Equidae) | 0 | 0 | 0 | 0 | 0 |
| Pigs | 195 | 5591 | 599 | 54 | 6439 |
| Goats | 0 | 46 | 2 | 0 | 48 |
| Sheep | 0 | 693 | 0 | 0 | 693 |
| Cattle | 0 | 975 | 111 | 0 | 1086 |
| Prosimians | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 46 | 112 | 0 | 158 |
| Cynomolgus monkey | 0 | 474 | 1198 | 0 | 1672 |
| Rhesus monkey | 0 | 0 | 4 | 0 | 4 |
| Vervets Chlorocebus spp. | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|---|--------------|---------------|--------------|--------------|---------------|
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 |
| Other species of New World Monkeys (Ceboidae) | 0 | 0 | 0 | 0 | 0 |
| Apes | 0 | 0 | 0 | 0 | 0 |
| Other mammals | 0 | 0 | 2 | 0 | 2 |
| Domestic fowl | 130 | 2995 | 0 | 6 | 3131 |
| Other birds | 0 | 147 | 0 | 0 | 147 |
| Reptiles | 0 | 0 | 0 | 0 | 0 |
| Rana | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 8410 | 80 | 120 | 8610 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 |
| Zebrafish | 35 | 14765 | 9487 | 1707 | 25994 |
| Other fish | 0 | 6368 | 579 | 784 | 7731 |
| Cephalopods | 0 | 0 | 0 | 0 | 0 |
| Total uses | 24014 | 252741 | 46871 | 37752 | 361378 |
| | 6.6% | 69.9% | 13.0% | 10.4% | 100.0% |

Table 29: Quality control purposes and severity

| Purposes | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|------------------------|--------------|----------------------------|-------------|--------------|---------------|
| Batch safety testing | 85 | 21858 | 3645 | 2 | 25590 |
| Pyrogenicity testing | 0 | 3184 | 39 | 0 | 3223 |
| Batch potency testing | 0 | 40558 | 430 | 33090 | 74078 |
| Other quality controls | 0 | 6 | 0 | 430 | 436 |
| Total uses | 85 | 65606 | 4114 | 33522 | 103327 |
| | 0.1% | 63.5% | 4.0% | 32.4% | 100.0% |

Table 30: Routine production purposes and severity

| Purposes | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|----------------------|--------------|----------------------------|-------------|-------------|---------------|
| Blood based products | 20706 | 37120 | 873 | 0 | 58699 |
| Monoclonal antibody | 0 | 1056 | 0 | 0 | 1056 |
| Other product type | 75 | 2019 | 172 | 0 | 2266 |
| Total uses | 20781 | 40195 | 1045 | 0 | 62021 |
| | 33.5% | 64.8% | 1.7% | 0.0% | 100.0% |

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

| Purposes | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|---|--------------|----------------------------|--------------|-------------|---------------|
| Acute and sub-acute toxicity | 0 | 2800 | 530 | 358 | 3688 |
| Skin irritation / corrosion | 0 | 261 | 42 | 0 | 303 |
| Skin sensitisation | 0 | 3844 | 586 | 1 | 4431 |
| Eye irritation / corrosion | 0 | 13 | 1 | 0 | 14 |
| Repeated dose toxicity | 0 | 7988 | 3853 | 87 | 11928 |
| Carcinogenicity | 0 | 48 | 37 | 0 | 85 |
| Genotoxicity | 2 | 1982 | 80 | 3 | 2067 |
| Reproductive toxicity | 0 | 22681 | 559 | 53 | 23293 |
| Developmental toxicity | 0 | 18824 | 281 | 40 | 19145 |
| Neurotoxicity | 0 | 40 | 57 | 3 | 100 |
| Kinetics | 392 | 10354 | 2590 | 89 | 13425 |
| Pharmaco-dynamics (incl. safety pharmacology) | 2488 | 27476 | 14458 | 522 | 44944 |
| Phototoxicity | 0 | 0 | 0 | 0 | 0 |
| Ecotoxicity | 35 | 29545 | 10146 | 2611 | 42337 |
| Safety testing in food and feed area | 0 | 2174 | 0 | 0 | 2174 |
| Target animal safety | 0 | 7200 | 381 | 0 | 7581 |
| Other | 1 | 8775 | 425 | 0 | 9201 |
| Total uses | 2918 | 144005 | 34026 | 3767 | 184716 |
| | 1.6% | 78.0% | 18.4% | 2.0% | 100.0% |

Table 32: Repeated dose toxicity testing methods and severity

| | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|-------------------|--------------|----------------------------|--------------|-------------|---------------|
| up to 28 days | 0 | 4730 | 1685 | 76 | 6491 |
| 29 - 90 days | 0 | 2447 | 1233 | 1 | 3681 |
| > 90 days | 0 | 811 | 935 | 10 | 1756 |
| Total uses | 0 | 7988 | 3853 | 87 | 11928 |
| | 0.0% | 67.0% | 32.3% | 0.7% | 100.0% |

Table 33: Acute and subacute toxicity testing methods and severity

| | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|----------------------|--------------|----------------------------|--------------|-------------|---------------|
| LD50, LC50 | 0 | 124 | 271 | 300 | 695 |
| Other lethal methods | 0 | 0 | 0 | 0 | 0 |
| Non lethal method | 0 | 2676 | 259 | 58 | 2993 |
| Total uses | 0 | 2800 | 530 | 358 | 3688 |
| | 0.0% | 75.9% | 14.4% | 9.7% | 100.0% |

Table 34: Ecotoxicity testing methods and severity

| Methods | Non-recovery | Mild (up to and including) | Moderate | Severe | Total |
|--------------------------|--------------|----------------------------|--------------|-------------|---------------|
| Acute toxicity | 35 | 3283 | 1954 | 1411 | 6683 |
| Chronic toxicity | 0 | 11614 | 8089 | 1036 | 20739 |
| Reproductive ecotoxicity | 0 | 1175 | 1 | 152 | 1328 |
| Endocrine activity | 0 | 11400 | 102 | 12 | 11514 |
| Bioaccumulation | 0 | 1657 | 0 | 0 | 1657 |
| Other exotoxicity | 0 | 416 | 0 | 0 | 416 |
| Total uses | 35 | 29545 | 10146 | 2611 | 42337 |
| | 0.1% | 69.8% | 24.0% | 6.2% | 100.0% |

9. Purposes and testing by type of legislation

Table 35: Regulatory use (without routine production) purposes: type of legislation

| Type of legislation | Quality control (incl. batch safety and potency testing) | Other efficacy and tolerance testing | Toxicity and other safety testing including pharmacology | Total |
|--|--|--------------------------------------|--|---------------|
| Legislation on medicinal products for human use | 98437 | 9515 | 69641 | 177593 |
| Legislation on medicinal products for veterinary use and their residues | 4854 | 1107 | 7847 | 13808 |
| Medical devices legislation | 30 | 194 | 5329 | 5553 |
| Industrial chemicals legislation | 0 | 0 | 43509 | 43509 |
| Plant protection product legislation | 0 | 0 | 53145 | 53145 |
| Biocides legislation | 0 | 325 | 187 | 512 |
| Food legislation including food contact material | 0 | 0 | 417 | 417 |
| Feed legislation including legislation for the safety of target animals, workers and environment | 6 | 0 | 2170 | 2176 |
| Cosmetics legislation | 0 | 0 | 0 | 0 |
| Other | 0 | 173 | 2471 | 2644 |
| Total uses | 103327 | 11314 | 184716 | 299357 |
| | 34.5% | 3.8% | 61.7% | 100.0% |

Table 36: Quality control purposes: type of legislation

| Type of legislation | Batch safety testing | Pyrogenicity testing | Batch potency testing | Other quality controls | Total |
|--|----------------------|----------------------|-----------------------|------------------------|---------------|
| Legislation on medicinal products for human use | 24843 | 3220 | 69944 | 430 | 98437 |
| Legislation on medicinal products for veterinary use and their residues | 720 | 0 | 4134 | 0 | 4854 |
| Medical devices legislation | 27 | 3 | 0 | 0 | 30 |
| Industrial chemicals legislation | 0 | 0 | 0 | 0 | 0 |
| Plant protection product legislation | 0 | 0 | 0 | 0 | 0 |
| Biocides legislation | 0 | 0 | 0 | 0 | 0 |
| Food legislation including food contact material | 0 | 0 | 0 | 0 | 0 |
| Feed legislation including legislation for the safety of target animals, workers and environment | 0 | 0 | 0 | 6 | 6 |
| Cosmetics legislation | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 |
| Total uses | 25590 | 3223 | 74078 | 436 | 103327 |
| | 24.8% | 3.1% | 71.7% | 0.4% | 100.0% |

Table 37: Routine production purposes: type of legislation

Comment: With the new Implementing Decision 2020/569/EU, the type of legislation for routine production purposes is not anymore part of the annual reporting.
For a better comparison to the former year, the numbering of the tables has been maintained.

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

| Type of legislation | Acute and sub-acute toxicity | Skin irritation / corrosion | Skin sensitisation | Eye irritation / corrosion | Repeated dose toxicity | Carcinogenicity | Genotoxicity | Reproductive toxicity | Developmental toxicity | Neurotoxicity | Kinetics | Pharmaco-dynamics (incl. safety pharmaco-) | Phototoxicity | Ecotoxicity | Safety testing in food and feed area | Target animal safety | Other | Total |
|--|------------------------------|-----------------------------|--------------------|----------------------------|------------------------|-----------------|--------------|-----------------------|------------------------|---------------|--------------|--|---------------|--------------|--------------------------------------|----------------------|-------------|---------------|
| Legislation on medicinal products for human use | 1425 | 3 | 157 | 3 | 6763 | 0 | 461 | 672 | 58 | 0 | 12275 | 44487 | 0 | 2872 | 0 | 0 | 465 | 69641 |
| Legislation on medicinal products for veterinary use and their residues | 0 | 0 | 0 | 0 | 64 | 0 | 27 | 0 | 0 | 0 | 426 | 455 | 0 | 85 | 0 | 5426 | 1364 | 7847 |
| Medical devices legislation | 1356 | 234 | 2484 | 3 | 237 | 48 | 148 | 0 | 0 | 0 | 40 | 2 | 0 | 585 | 0 | 0 | 192 | 5329 |
| Industrial chemicals legislation | 630 | 57 | 1399 | 8 | 2667 | 37 | 534 | 16687 | 6328 | 0 | 26 | 0 | 0 | 15026 | 0 | 0 | 110 | 43509 |
| Plant protection product legislation | 234 | 9 | 391 | 0 | 1831 | 0 | 810 | 5934 | 12759 | 100 | 589 | 0 | 0 | 21770 | 0 | 1888 | 6830 | 53145 |
| Biocides legislation | 6 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 69 | 0 | 0 | 60 | 0 | 0 | 0 | 187 |
| Food legislation including food contact material | 12 | 0 | 0 | 0 | 366 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 417 |
| Feed legislation including legislation for the safety of target animals, workers and environment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2170 | 0 | 0 | 2170 |
| Cosmetics legislation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1939 | 0 | 267 | 240 | 2471 |
| Total uses | 3688 | 303 | 4431 | 14 | 11928 | 85 | 2067 | 23293 | 19145 | 100 | 13425 | 44944 | 0 | 42337 | 2174 | 7581 | 9201 | 184716 |
| Percentage (%) | 2.0 | 0.2 | 2.4 | 0.0 | 6.5 | 0.0 | 1.1 | 12.6 | 10.4 | 0.1 | 7.3 | 24.3 | 0.0 | 22.9 | 1.2 | 4.1 | 5.0 | 100.0 |

Table 39: Repeated dose toxicity purposes: type of legislation

| Type of legislation | up to 28 days | 29 - 90 days | > 90 days | Total |
|--|---------------|--------------|--------------|---------------|
| Legislation on medicinal products for human use | 4286 | 897 | 1580 | 6763 |
| Legislation on medicinal products for veterinary use and their residues | 64 | 0 | 0 | 64 |
| Medical devices legislation | 100 | 137 | 0 | 237 |
| Industrial chemicals legislation | 940 | 1551 | 176 | 2667 |
| Plant protection product legislation | 1101 | 730 | 0 | 1831 |
| Biocides legislation | 0 | 0 | 0 | 0 |
| Food legislation including food contact material | 0 | 366 | 0 | 366 |
| Feed legislation including legislation for the safety of target animals, workers and environment | 0 | 0 | 0 | 0 |
| Cosmetics legislation | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 |
| Total uses | 6491 | 3681 | 1756 | 11928 |
| | 54.4% | 30.9% | 14.7% | 100.0% |

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

| Type of legislation | LD50, LC50 | Other lethal methods | Non lethal methods | Total |
|--|--------------|----------------------|--------------------|---------------|
| Legislation on medicinal products for human use | 0 | 0 | 1425 | 1425 |
| Legislation on medicinal products for veterinary use and their residues | 0 | 0 | 0 | 0 |
| Medical devices legislation | 0 | 0 | 1356 | 1356 |
| Industrial chemicals legislation | 481 | 0 | 149 | 630 |
| Plant protection product legislation | 214 | 0 | 20 | 234 |
| Biocides legislation | 0 | 0 | 6 | 6 |
| Food legislation including food contact material | 0 | 0 | 12 | 12 |
| Feed legislation including legislation for the safety of target animals, workers and environment | 0 | 0 | 0 | 0 |
| Cosmetics legislation | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 25 | 25 |
| Total uses | 695 | 0 | 2993 | 3688 |
| | 18.8% | 0.0% | 81.2% | 100.0% |

Table 41: Ecotoxicity purposes: type of legislation

| Type of legislation | Acute toxicity | Chronic toxicity | Reproductive ecotoxicity | Endocrine activity | Bioaccumulation | Other exotoxicity | Total |
|--|----------------|------------------|--------------------------|--------------------|-----------------|-------------------|---------------|
| Legislation on medicinal products for human use | 0 | 2872 | 0 | 0 | 0 | 0 | 2872 |
| Legislation on medicinal products for veterinary use and their residues | 85 | 0 | 0 | 0 | 0 | 0 | 85 |
| Medical devices legislation | 49 | 0 | 0 | 0 | 536 | 0 | 585 |
| Industrial chemicals legislation | 898 | 12272 | 960 | 0 | 896 | 0 | 15026 |
| Plant protection product legislation | 3841 | 5595 | 314 | 11388 | 225 | 407 | 21770 |
| Biocides legislation | 30 | 0 | 0 | 30 | 0 | 0 | 60 |
| Food legislation including food contact material | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Feed legislation including legislation for the safety of target animals, workers and environment | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cosmetics legislation | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 1780 | 0 | 54 | 96 | 0 | 9 | 1939 |
| Total uses | 6683 | 20739 | 1328 | 11514 | 1657 | 416 | 42337 |
| | 15.8% | 49.0% | 3.1% | 27.2% | 3.9% | 1.0% | 100.0% |

10. Purposes and origin of legislative requirements

Table 42: Regulatory use (without routine production): origin of legislative requirement

| Origin of legislative requirement | Quality control (incl. batch safety and potency testing) | Other efficacy and tolerance testing | Toxicity and other safety testing including pharmacology | Total |
|---|--|--------------------------------------|--|---------------|
| Legislation satisfying EU requirements | 101032 | 11141 | 183297 | 295470 |
| Legislation satisfying national requirements only (within EU) | 203 | 173 | 238 | 614 |
| Legislation satisfying Non-EU requirements only | 2092 | 0 | 1181 | 3273 |
| Total uses | 103327 | 11314 | 184716 | 299357 |
| | 34.5% | 3.8% | 61.7% | 100.0% |

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

| Origin of legislative requirement | Acute and sub-acute toxicity | Skin irritation / corrosion | Skin sensitisation | Eye irritation / corrosion | Repeated dose toxicity | Carcinogenicity | Genotoxicity | Reproductive toxicity | Developmental toxicity | Neurotoxicity | Kinetics | Pharmaco-dynamics (incl safety pharmacology) | Phototoxicity | Ecotoxicity | Safety testing in food and feed area | Target animal safety | Other toxicity/safety testing | Total |
|---|------------------------------|-----------------------------|--------------------|----------------------------|------------------------|-----------------|--------------|-----------------------|------------------------|---------------|--------------|--|---------------|--------------|--------------------------------------|----------------------|-------------------------------|---------------|
| Legislation satisfying EU requirements | 3584 | 259 | 3766 | 7 | 11874 | 85 | 2022 | 23293 | 19145 | 100 | 13358 | 44720 | 0 | 42132 | 2170 | 7581 | 9201 | 183297 |
| Legislation satisfying national requirements only (within EU) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 167 | 4 | 0 | 0 | 238 |
| Legislation satisfying Non-EU requirements only | 104 | 44 | 665 | 7 | 54 | 0 | 45 | 0 | 0 | 0 | 0 | 224 | 0 | 38 | 0 | 0 | 0 | 1181 |
| Total uses | 3688 | 303 | 4431 | 14 | 11928 | 85 | 2067 | 23293 | 19145 | 100 | 13425 | 44944 | 0 | 42337 | 2174 | 7581 | 9201 | 184716 |
| Percentage (%) | 2.0 | 0.2 | 2.4 | 0.0 | 6.5 | 0.0 | 1.1 | 12.6 | 10.4 | 0.1 | 7.3 | 24.3 | 0.0 | 22.9 | 1.2 | 4.1 | 5.0 | 100.0 |

Table 44: Repeated dose toxicity: origin of legislative requirement

| Origin of legislative requirement | up to 28 days | 29 - 90 days | > 90 days | Total |
|---|---------------|--------------|--------------|---------------|
| Legislation satisfying EU requirements | 6439 | 3679 | 1756 | 11874 |
| Legislation satisfying national requirements only (within EU) | 0 | 0 | 0 | 0 |
| Legislation satisfying Non-EU requirements only | 52 | 2 | 0 | 54 |
| Total uses | 6491 | 3681 | 1756 | 11928 |
| | 54.4% | 30.9% | 14.7% | 100.0% |

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

| Origin of legislative requirement | LD50, LC50 | Other lethal methods | Non lethal method | Total |
|---|--------------|----------------------|-------------------|---------------|
| Legislation satisfying EU requirements | 635 | 0 | 2949 | 3584 |
| Legislation satisfying national requirements only (within EU) | 0 | 0 | 0 | 0 |
| Legislation satisfying Non-EU requirements only | 60 | 0 | 44 | 104 |
| Total uses | 695 | 0 | 2993 | 3688 |
| | 18.8% | 0.0% | 81.2% | 100.0% |

Table 46: Ecotoxicity testing: origin of legislative requirement

| Origin of legislative requirement | Acute toxicity | Chronic toxicity | Reproductive ecotoxicity | Endocrine activity | Bioaccumulation | Other exotoxicity | Total |
|---|----------------|------------------|--------------------------|--------------------|-----------------|-------------------|---------------|
| Legislation satisfying EU requirements | 6487 | 20739 | 1328 | 11514 | 1657 | 407 | 42132 |
| Legislation satisfying national requirements only (within EU) | 158 | 0 | 0 | 0 | 0 | 9 | 167 |
| Legislation satisfying Non-EU requirements only | 38 | 0 | 0 | 0 | 0 | 0 | 38 |
| Total uses | 6683 | 20739 | 1328 | 11514 | 1657 | 416 | 42337 |
| | 15.8% | 49.0% | 3.1% | 27.2% | 3.9% | 1.0% | 100.0% |

11. Animals used under §4 (3) of the Animal Protection Act by species

| Table 47: Animals used by species | | |
|---|--------------------|----------------|
| Animal species | Number of animals* | Percentage |
| Mice | 505140 | 79.70% |
| Rats | 55157 | 8.70% |
| Guinea-Pigs | 460 | 0.07% |
| Hamsters (Syrian) | 87 | 0.01% |
| Hamsters (Chinese) | 9 | 0.00% |
| Mongolian gerbil | 494 | 0.08% |
| Other rodents | 3633 | 0.57% |
| Rabbits | 334 | 0.05% |
| Cats | 0 | 0.00% |
| Dogs | 2 | 0.00% |
| Ferrets | 9 | 0.00% |
| Other carnivores | 0 | 0.00% |
| Horses, donkeys & cross-breeds (Equidae) | 3 | 0.00% |
| Pigs | 928 | 0.15% |
| Goats | 59 | 0.01% |
| Sheep | 46 | 0.01% |
| Cattle | 7 | 0.00% |
| Prosimians | 0 | 0.00% |
| Marmoset and tamarins | 27 | 0.00% |
| Cynomolgus monkey | 33 | 0.01% |
| Rhesus monkey | 20 | 0.00% |
| Vervets Chlorocebus spp. | 0 | 0.00% |
| Baboons | 0 | 0.00% |
| Squirrel monkey | 0 | 0.00% |
| Other species of Old World Monkeys (Cercopithecoidea) | 0 | 0.00% |
| Other species of New World Monkeys (Ceboidea) | 0 | 0.00% |
| Apes | 0 | 0.00% |
| Other mammals | 360 | 0.06% |
| Domestic fowl | 6765 | 1.07% |
| Other birds | 413 | 0.07% |
| Reptiles | 220 | 0.03% |
| Rana | 0 | 0.00% |
| Xenopus | 1217 | 0.19% |
| Other amphibians | 385 | 0.06% |
| Zebrafish | 25883 | 4.08% |
| Other fish | 32093 | 5.06% |
| Cephalopods | 0 | 0.00% |
| Total uses | 633784 | 100.00% |

* die Benennung der Spalte wurde am 20.12.2022 korrigiert.