

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 | % |
|--------------------------------|-------------------|-----------------|
| Mice | 1.516.931 | 72,30% |
| Rats | 216.510 | 10,32% |
| Guinea-Pigs | 13.946 | 0,66% |
| Hamsters (Syrian) | 932 | 0,04% |
| Mongolian gerbil | 3.283 | 0,16% |
| Other Rodents | 2.895 | 0,14% |
| Rabbits | 81.201 | 3,87% |
| Cats | 556 | 0,03% |
| Dogs | 2.108 | 0,10% |
| Ferrets | 69 | 0,00% |
| Other carnivores | 389 | 0,02% |
| Horses, donkeys & cross-breeds | 431 | 0,02% |
| Pigs | 17.624 | 0,84% |
| Goats | 475 | 0,02% |
| Sheep | 4.613 | 0,22% |
| Cattle | 6.828 | 0,33% |
| Prosimians | 11 | 0,00% |
| Marmoset and tamarins | 198 | 0,01% |
| Cynomolgus monkey | 2.314 | 0,11% |
| Rhesus monkey | 51 | 0,00% |
| Baboons | 10 | 0,00% |
| Squirrel monkey | 25 | 0,00% |
| Other Mammals | 1.423 | 0,07% |
| Domestic fowl | 22.815 | 1,09% |
| Other birds | 6.909 | 0,33% |
| Reptiles | 146 | 0,01% |
| Rana | 834 | 0,04% |
| Xenopus | 1.464 | 0,07% |
| Other Amphibians | 1.559 | 0,07% |
| Zebra fish | 108.215 | 5,16% |
| Other Fish | 83.410 | 3,98% |
| Cephlopods | 59 | 0,00% |
| Total | 2.098.234 | 100,00 % |

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

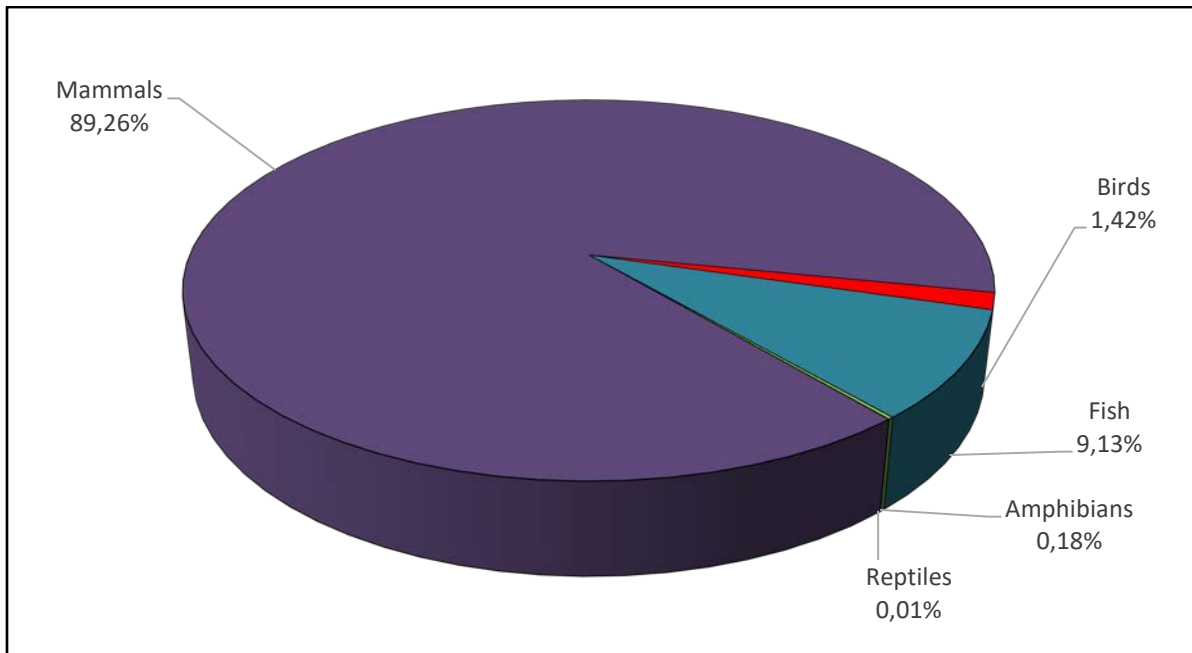


Table 2: Animals used by species groups (excludes re-use)

| Species grouping Level 1 | Number of Animals |
|--------------------------|-------------------|
| Warm-blooded vertebrates | 1.902.547 |
| Invertebrates | 59 |
| Cold-blooded vertebrates | 195.628 |
| Total | 2.098.234 |

| Mammals | Number of Animals |
|--------------------|-------------------|
| Rodents | 1.754.497 |
| Rabbits | 81.201 |
| Carnivores | 3.122 |
| Equidae | 431 |
| Artiodactyla | 29.540 |
| Non-human primates | 2.609 |
| Other mammals | 1.423 |
| Total | 1.872.823 |

| Species grouping Level 2 | Number of Animals |
|--------------------------|-------------------|
| Mammals | 1.872.823 |
| Birds | 29.724 |
| Fish | 191.625 |
| Amphibians | 3.857 |
| Reptiles | 146 |
| Cephalopods | 59 |
| Total | 2.098.234 |

| Non-human primates | Number of Animals |
|--------------------|-------------------|
| Prosimians | 11 |
| New World Monkeys | 223 |
| Old World Monkeys | 2.375 |
| Total | 2.609 |

2. Origin of used Animals

Table 3: Origin of used animals in total (excludes re-use)

| | 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 | 1.473.690 | 9.640 | 22.935 | 10.666 | 1.516.931 |
| Rats | 214.939 | 357 | 28 | 1.186 | 216.510 |
| Guinea-Pigs | 13.869 | 77 | | | 13.946 |
| Hamsters (Syrian) | 772 | | | 160 | 932 |
| Mongolian gerbil | 3.047 | 236 | | | 3.283 |
| Other Rodents | 831 | 2.045 | | 19 | 2.895 |
| Rabbits | 80.880 | 311 | | 10 | 81.201 |
| Cats | 101 | 321 | | 134 | 556 |
| Dogs | 178 | 953 | | 977 | 2.108 |
| Ferrets | 22 | 34 | | 13 | 69 |
| Other carnivores | 379 | 8 | 2 | | 389 |
| Horses, donkeys & cross-breeds | 173 | 258 | | | 431 |
| Pigs | 10.889 | 6.723 | | 12 | 17.624 |
| Goats | 63 | 412 | | | 475 |
| Sheep | 490 | 4.123 | | | 4.613 |
| Cattle | 5.625 | 1.203 | | | 6.828 |
| Prosimians | 11 | | | | 11 |
| Marmoset and tamarins | 198 | | | | 198 |
| Cynomolgus monkey | 100 | | | 2.214 | 2.314 |
| Rhesus monkey | 37 | | | 14 | 51 |

Versuchstierdaten 2018

| | | | | | |
|------------------|------------------|---------------|---------------|---------------|------------------|
| Baboons | 10 | | | | 10 |
| Squirrel monkey | 25 | | | | 25 |
| Other Mammals | 108 | 1.306 | | 9 | 1.423 |
| Domestic fowl | 15.182 | 7.633 | | | 22.815 |
| Other birds | 1.381 | 5.334 | 93 | 101 | 6.909 |
| Reptiles | 64 | 36 | | 46 | 146 |
| Rana | 5 | 829 | | | 834 |
| Xenopus | 542 | | | 922 | 1.464 |
| Other Amphibians | 856 | 703 | | | 1.559 |
| Zebra fish | 102.945 | 5.265 | 5 | | 108.215 |
| Other Fish | 35.307 | 45.128 | 1.688 | 1.287 | 83.410 |
| Cephalopods | | 59 | | | 59 |
| Total | 1.962.719 | 92.994 | 24.751 | 17.770 | 2.098.234 |

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

| Species grouping Level 1 | Animals born in the EU at a registered breeder | Animals born in the EU but not at a registered breeder | Animals born in rest of Europe | Animals born in rest of the world | Total |
|--------------------------|--|--|--------------------------------|-----------------------------------|------------------|
| Warm-blooded vertebrates | 1.823.000 | 40.974 | 23.058 | 15.515 | 1.902.547 |
| Cold-blooded vertebrates | 139.719 | 51.961 | 1.693 | 2.255 | 195.628 |
| Invertebrates | | 59 | | | 59 |
| Total | 1.962.719 | 92.994 | 24.751 | 17.770 | 2.098.234 |

| Species grouping Level 2 | Animals born in the EU at a registered breeder | Animals born in the EU but not at a registered breeder | Animals born in rest of Europe | Animals born in rest of the world | Total |
|--------------------------|--|--|--------------------------------|-----------------------------------|------------------|
| Mammals | 1.806.437 | 28.007 | 22.965 | 15.414 | 1.872.823 |
| Birds | 16.563 | 12.967 | 93 | 101 | 29.724 |
| Fish | 138.252 | 50.393 | 1.693 | 1.287 | 191.625 |
| Amphibians | 1.403 | 1.532 | | 922 | 3.857 |
| Reptiles | 64 | 36 | | 46 | 146 |
| Cephalopods | | 59 | | | 59 |
| Total | 1.962.719 | 92.994 | 24.751 | 17.770 | 2.098.234 |

| Mammals | Animals born in the EU at a registered breeder | Animals born in the EU but not at a registered breeder | Animals born in rest of Europe | Animals born in rest of the world | Total |
|--------------------|--|--|--------------------------------|-----------------------------------|------------------|
| Rodents | 1.707.148 | 12.355 | 22.963 | 12.031 | 1.754.497 |
| Rabbits | 80.880 | 311 | | 10 | 81.201 |
| Carnivores | 680 | 1.316 | 2 | 1.124 | 3.122 |
| Equidae | 173 | 258 | | | 431 |
| Artiodactyla | 17.067 | 12.461 | | 12 | 29.540 |
| Non-human primates | 381 | | | 2.228 | 2.609 |
| Other mammals | 108 | 1.306 | | 9 | 1.423 |
| Total | 1.806.437 | 28.007 | 22.965 | 15.414 | 1.872.823 |

3. Non-Human Primates by source and generation

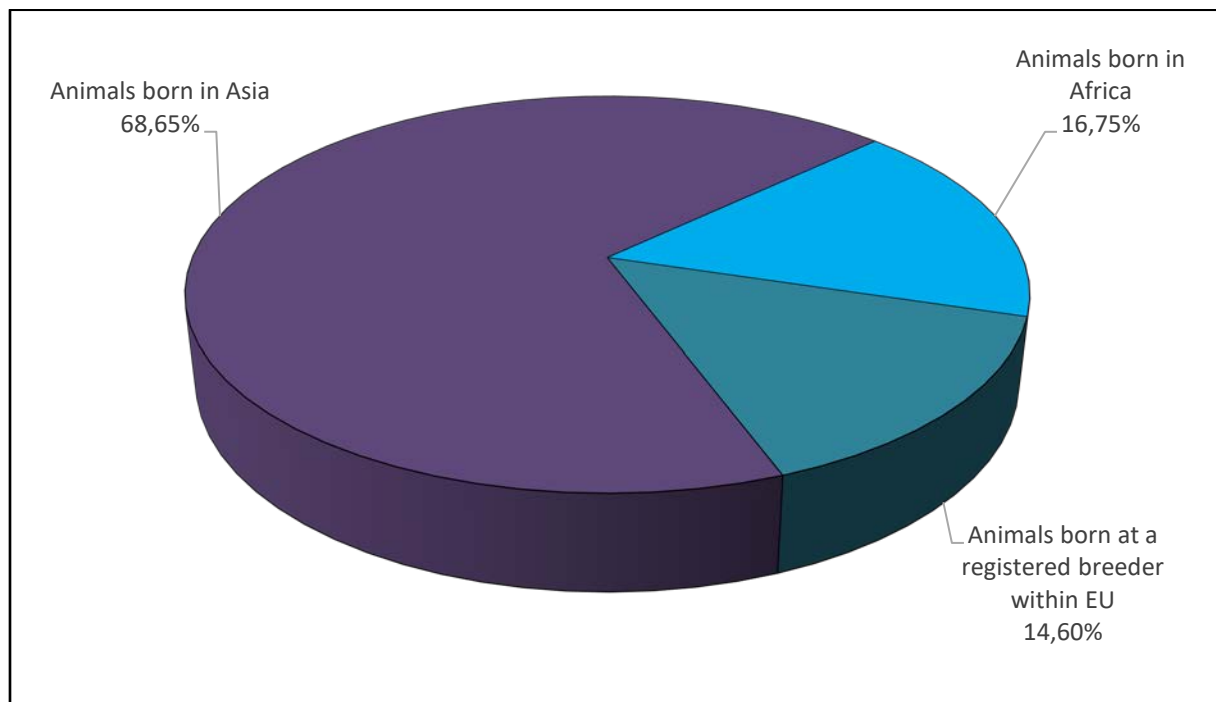
Table 7: Generation of non-human primates (excludes re-use)

| NHP Generation | Number of Animals |
|------------------------|-------------------|
| F0 | 0 |
| F1 | 217 |
| F2 or greater | 1.724 |
| Self-sustaining colony | 668 |
| Total | 2.609 |

Table 8: Origin of non-human primates (excludes re-use)

| NHP Source (origin) | Number of Animals |
|--|-------------------|
| Animals born at a registered breeder within EU | 381 |
| Animals born in rest of Europe | 0 |
| Animals born in Asia | 1.791 |
| Animals born in America | 0 |
| Animals born in Africa | 437 |
| Animals born elsewhere | 0 |
| Total: | 2.609 |

Figure 2: Origin of non-human primates (%) (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 | Maintenance of colonies of established genetically altered animals, not used in other procedures | Total |
|--------------------------------|----------------|------------------------------------|---------------------------------------|--|-------------------------|---|--|-----------|
| Mice | 741.385 | 252.846 | 191.074 | | 6.351 | 38.146 | 309.773 | 1.539.575 |
| Rats | 31.263 | 28.693 | 151.931 | | | 9.432 | 1.492 | 222.811 |
| Guinea-Pigs | 561 | 903 | 12.382 | | | 383 | | 14.229 |
| Hamsters (Syrian) | 36 | 686 | 188 | | | 30 | | 940 |
| Mongolian gerbil | 1.134 | 1.902 | 203 | | | 127 | | 3.366 |
| Other Rodents | 2.502 | 352 | 40 | 38 | | 10 | | 2.942 |
| Rabbits | 839 | 1.164 | 82.925 | | | 265 | | 85.193 |
| Cats | 98 | 352 | 263 | 8 | | 44 | | 765 |
| Dogs | 249 | 997 | 2.109 | | | 624 | | 3.979 |
| Ferrets | 55 | 26 | | | | 14 | | 95 |
| Other carnivores | 2 | | 387 | | | | | 389 |
| Horses, donkeys & cross-breeds | 493 | 222 | 7 | | | 70 | | 792 |
| Pigs | 5.505 | 7.214 | 3.007 | 1.510 | 77 | 1.570 | | 18.883 |
| Goats | | 337 | 104 | | | 58 | | 499 |
| Sheep | 222 | 3.358 | 887 | 106 | | 178 | | 4.751 |
| Cattle | 4.145 | 1.088 | 1.242 | 304 | | 528 | | 7.307 |
| Prosimians | 63 | | | | | | | 63 |

Versuchstierdaten 2018

| | | | | | | | | | |
|---|----------------|----------------|----------------|--------------|---------------|---------------|----------------|--|------------------|
| Marmoset and tamarins | 67 | 12 | 150 | | | | | | 229 |
| Cynomolgus monkey | 19 | 251 | 2.605 | | | | | | 2.875 |
| Rhesus monkey | 28 | 37 | | | | | | | 65 |
| Vervets Chlorocebus spp. | | 14 | | | | | | | 14 |
| Baboons | | 10 | | | | | | | 10 |
| Squirrel monkey | | 25 | | | | | | | 25 |
| Other species of Old World Monkeys (Cercopithecoidea) | | 7 | | | | | | | 7 |
| Other Mammals | 912 | 215 | 35 | 17 | 20 | 240 | | | 1.439 |
| Domestic fowl | 6.674 | 7.478 | 6.587 | 1.756 | | 348 | 219 | | 23.062 |
| Other birds | 5.868 | 679 | 290 | 127 | 108 | 259 | | | 7.331 |
| Reptiles | 113 | 28 | 5 | | | 6 | | | 152 |
| Rana | 810 | | | 19 | | 5 | | | 834 |
| Xenopus | 2.205 | 25 | 60 | | | 144 | | | 2.434 |
| Other Amphibians | 491 | | | 26 | 651 | 391 | | | 1.559 |
| Zebra fish | 79.210 | 5.057 | 17.307 | 1.010 | | 1.763 | 3.868 | | 108.215 |
| Other Fish | 52.802 | 9.117 | 10.466 | 3.368 | 6.881 | 697 | 494 | | 83.825 |
| Cephalopods | 5 | | | | | 54 | | | 59 |
| Total | 937.756 | 323.095 | 484.254 | 8.289 | 14.088 | 55.386 | 315.846 | | 2.138.714 |

Figure 3: Use of animals in procedures by purposes

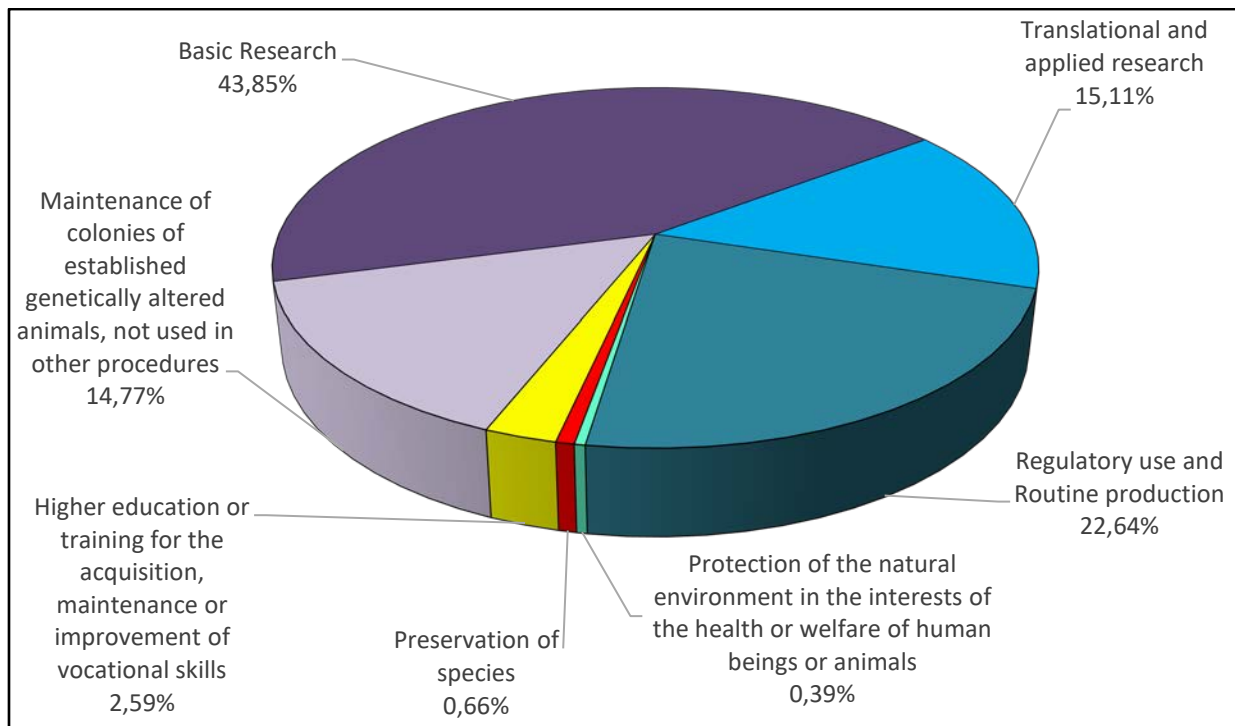


Table 10: Use of species in basic research purposes

| | Oncology | Cardio-vascular Blood and Lymphatic System | Nervous System | Respiratory System | Gastrointestinal System including Liver | Musculoskeletal System | Immune System | Urogenital/ Reproductive System | Sensory Organs (skin, eyes and ears) | Endocrine System/ Metabolism | Multisystemic | Ethology / Animal Behaviour /Animal Biology | Other basic research | Total |
|--------------------------------|----------|--|----------------|--------------------|---|------------------------|---------------|---------------------------------|--------------------------------------|------------------------------|---------------|---|----------------------|----------------|
| Mice | 88.071 | 71.605 | 143.912 | 18.849 | 25.946 | 18.368 | 176.857 | 20.042 | 13.141 | 48.249 | 101.195 | 2.187 | 12.963 | 741.385 |
| Rats | 355 | 3.953 | 15.737 | 928 | 1.537 | 873 | 3.738 | 452 | 243 | 1.139 | 1.556 | 648 | 104 | 31.263 |
| Guinea-Pigs | 33 | | 14 | 10 | | | | 31 | 229 | 77 | 109 | 58 | | 561 |
| Hamsters (Syrian) | | | 36 | | | | | | | | | | | 36 |
| Mongolian gerbil | | | 522 | | 55 | | 196 | | 361 | | | | | 1.134 |
| Other Rodents | 81 | | 72 | | | 5 | 108 | 96 | 31 | | 81 | 2.028 | | 2.502 |
| Rabbits | 7 | 120 | 3 | 15 | 4 | 46 | 13 | 2 | 194 | | 429 | 1 | 5 | 839 |
| Cats | | | 3 | | | 39 | | | | 44 | 12 | | | 98 |
| Dogs | 127 | | | 24 | 4 | | | 2 | | 24 | 68 | | | 249 |
| Ferrets | | | 25 | | | | | | | | 30 | | | 55 |
| Other carnivores | | | | | | | | | | | | 2 | | 2 |
| Horses, donkeys & cross-breeds | | | 80 | | | 42 | 24 | 261 | | 42 | 36 | 8 | | 493 |
| Pigs | 18 | 501 | 274 | 244 | 272 | 72 | 224 | 112 | | 33 | 2.823 | 917 | 15 | 5.505 |
| Sheep | | 35 | | 3 | 69 | 40 | 8 | | | | 16 | 51 | | 222 |
| Cattle | | | 3 | | 101 | | 108 | 108 | | 2.909 | 695 | 221 | | 4.145 |
| Prosimians | | | | | | | | | | | | 63 | | 63 |
| Marmoset and tamarins | | | | | | | | 10 | | 12 | 45 | | | 67 |
| Cynomolgus | | | 7 | | | | 1 | | | 1 | 10 | | | 19 |

Versuchstierdaten 2018

| | | | | | | | | | | | | | | |
|------------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|---------------|---------------|----------------|
| monkey | | | | | | | | | | | | | | |
| Rhesus monkey | | | 14 | | | | 14 | | | | | | | 28 |
| Other Mammals | | | 93 | | | 3 | | | 6 | | 15 | 795 | | 912 |
| Domestic fowl | | 105 | 35 | | 3.356 | | 87 | | 205 | 1.122 | 511 | 1.253 | | 6.674 |
| Other birds | | | 123 | | | | | | 27 | | | 5.712 | 6 | 5.868 |
| Reptiles | | | 96 | 17 | | | | | | | | | | 113 |
| Rana | | | | | | | | | | | | 810 | | 810 |
| Xenopus | 12 | 27 | 592 | 5 | | | 87 | | 2 | 560 | 920 | | | 2.205 |
| Other Amphibians | | | 23 | | | 62 | | | | 380 | 26 | | | 491 |
| Zebra fish | 435 | 17.701 | 25.564 | | | 4.365 | 3.301 | 6.173 | 5.680 | 7.014 | 5.095 | 3.810 | 72 | 79.210 |
| Other Fish | 275 | 390 | 209 | 5 | | 553 | 643 | 58 | 3.326 | 11 | 369 | 46.929 | 34 | 52.802 |
| Cephalopods | | | 5 | | | | | | | | | | | 5 |
| Total | 89.414 | 94.437 | 187.442 | 20.100 | 31.344 | 24.468 | 185.322 | 27.434 | 23.443 | 60.679 | 114.035 | 66.439 | 13.199 | 937.756 |
| % | 9,53% | 10,07% | 19,99% | 2,14% | 3,34% | 2,61% | 19,76% | 2,93% | 2,50% | 6,47% | 12,16% | 7,08% | 1,41% | 100,00% |

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

| | Human Cancer | Human Infectious Disorders | Human Cardiovascular Disorders | Human Nervous and Mental Disorders | Human Respiratory Disorders | Human Gastrointestinal Disorders including Liver | Human Musculoskeletal Disorders | Human Immune Disorders | Human Urogenital/Reproductive Disorders | Human Sensory Organ Disorders (skin, eyes and ears) | Human Endocrine/Metabolism Disorders | Other Human Disorders | Animal Diseases and Disorders | Animal Welfare | Diagnosis of diseases | Plant diseases | Non-regulatory toxicology and ecotoxicology | Total |
|--------------------------------|--------------|----------------------------|--------------------------------|------------------------------------|-----------------------------|--|---------------------------------|------------------------|---|---|--------------------------------------|-----------------------|-------------------------------|----------------|-----------------------|----------------|---|----------------|
| Mice | 120.741 | 24.225 | 10.466 | 25.794 | 8.721 | 10.324 | 1.690 | 16.219 | 1.656 | 3.082 | 13.295 | 5.559 | 2.992 | 837 | 3.726 | | 3.519 | 252.846 |
| Rats | 1.242 | 105 | 2.389 | 9.864 | 923 | 3.515 | 1.006 | 988 | 508 | 1.858 | 4.079 | 472 | 437 | | 74 | | 1.233 | 28.693 |
| Guinea-Pigs | | 160 | 102 | | 264 | | | 125 | | 159 | 6 | 28 | 59 | | | | | 903 |
| Hamsters (Syrian) | | | 415 | 271 | | | | | | | | | | | | | | 686 |
| Mongolian gerbil | | 1.430 | | | | | | | | | | | 472 | | | | | 1.902 |
| Other Rodents | | 321 | | | | | | | | | | | 31 | | | | | 352 |
| Rabbits | 77 | 109 | 274 | | 16 | | 144 | 13 | | 121 | | | 181 | | 139 | 18 | 72 | 1.164 |
| Cats | | | | | | | | | | | | | 352 | | | | | 352 |
| Dogs | 24 | | 9 | 75 | 31 | | | 11 | | 27 | 62 | 6 | 732 | | | | 20 | 997 |
| Ferrets | | 4 | | | | | | | | | | | 22 | | | | | 26 |
| Horses, donkeys & cross-breeds | | | | | | | | | | | | | 222 | | | | | 222 |
| Pigs | 26 | 87 | 330 | 59 | 110 | 174 | 290 | 33 | 12 | 8 | 252 | 97 | 5.107 | 272 | 355 | | 2 | 7.214 |
| Goats | | 77 | | | | | | | | | | | 243 | | 17 | | | 337 |
| Sheep | | 423 | 59 | | 2 | | 24 | | | | | 21 | 2.109 | | 720 | | | 3.358 |
| Cattle | 27 | 6 | | | | 1 | | | | | | | 828 | 220 | 6 | | | 1.088 |

Versuchstierdaten 2018

| | | | | | | | | | | | | | | | | | | |
|---|----------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|--------------|--------------|---------------|--------------|---------------|--------------|--------------|--------------|--------------|----------------|
| Marmoset and tamarins | | | | | | | | | | 12 | | | | | | | | 12 |
| Cynomolgus monkey | 12 | | 20 | 52 | 50 | | | | | 37 | 37 | 43 | | | | | | 251 |
| Rhesus monkey | | 26 | 4 | | | | | | | | | 7 | | | | | | 37 |
| Vervets Chlorocebus spp. | | 14 | | | | | | | | | | | | | | | | 14 |
| Baboons | | | 10 | | | | | | | | | | | | | | | 10 |
| Squirrel monkey | | 25 | | | | | | | | | | | | | | | | 25 |
| Other species of Old World Monkeys (Cercopithecoidea) | | 7 | | | | | | | | | | | | | | | | 7 |
| Other Mammals | | 18 | | | | | | | | | | | 103 | 94 | | | | 215 |
| Domestic fowl | | 76 | | | | | | | | | | | 5.451 | 1.908 | 43 | | | 7.478 |
| Other birds | | 2 | | | | | | | | | | | 398 | 246 | 33 | | | 679 |
| Reptiles | | | | | | | | | | | | | 28 | | | | | 28 |
| Xenopus | | | | 25 | | | | | | | | | | | | | | 25 |
| Zebra fish | | | 3.080 | | | | | | | 873 | | | | | | | 1.104 | 5.057 |
| Other Fish | | | | | | | | | | | | | 3.784 | 2.160 | | | 3.173 | 9.117 |
| Total | 122.149 | 27.115 | 17.158 | 36.140 | 10.117 | 14.014 | 3.154 | 17.389 | 2.176 | 6.177 | 17.731 | 6.233 | 23.551 | 5.737 | 5.113 | 18 | 9.123 | 323.095 |
| % | 37,81% | 8,39% | 5,31% | 11,19% | 3,13% | 4,34% | 0,98% | 5,38% | 0,67% | 1,91% | 5,49% | 1,93% | 7,29% | 1,78% | 1,58% | 0,01% | 2,82% | 100,00% |

Table 12: Regulatory use of animals and routine production purposes

| | Quality control (incl batch safety and potency testing) | Other efficacy and tolerance testing | Toxicity and other safety testing includ- ing pharma- cology | Routine production | Total |
|-----------------------------------|--|--|--|-----------------------|----------------|
| Mice | 98.114 | 13.903 | 76.049 | 3.008 | 191.074 |
| Rats | 67.781 | 375 | 83.166 | 609 | 151.931 |
| Guinea-Pigs | 9.569 | 10 | 2.738 | 65 | 12.382 |
| Hamsters (Syrian) | 160 | | 28 | | 188 |
| Mongolian gerbil | | | 125 | 78 | 203 |
| Other Rodents | | 40 | | | 40 |
| Rabbits | 9.355 | 156 | 6.182 | 67.232 | 82.925 |
| Cats | 10 | 54 | 180 | 19 | 263 |
| Dogs | | 186 | 1.889 | 34 | 2.109 |
| Other carnivores | 341 | 46 | | | 387 |
| Horses, donkeys & cross-breeds | | | 7 | | 7 |
| Pigs | 147 | 1.863 | 985 | 12 | 3.007 |
| Goats | | | 58 | 46 | 104 |
| Sheep | 31 | | 160 | 696 | 887 |
| Cattle | 432 | 46 | 400 | 364 | 1.242 |
| Marmoset and tamarins | | | 150 | | 150 |
| Cynomolgus mon- key | | | 2.520 | 85 | 2.605 |
| Other Mammals | | | 34 | 1 | 35 |
| Domestic fowl | 3.004 | 977 | 1.538 | 1.068 | 6.587 |
| Other birds | | | 266 | 24 | 290 |
| Reptiles | | | 5 | 0 | 5 |
| Xenopus | | | 60 | | 60 |
| Zebra fish | | | 17.307 | | 17.307 |
| Other Fish | | | 10.118 | 348 | 10.466 |
| Total | 188.944 | 17.656 | 203.965 | 73.689 | 484.254 |
| % | 39,02% | 3,65% | 42,12% | 15,22% | 100,00% |

Table 13: Use of animals in quality control purposes

| | Batch safety testing | Pyrogenicity testing | Batch potency testing | Other quality controls | Total |
|-------------------|----------------------|----------------------|-----------------------|------------------------|----------------|
| Mice | 6.521 | | 91.593 | | 98.114 |
| Rats | 466 | | 67.315 | | 67.781 |
| Guinea-Pigs | 1.936 | | 7.633 | | 9.569 |
| Hamsters (Syrian) | | | 160 | | 160 |
| Rabbits | 250 | 6.291 | 1.715 | 1.099 | 9.355 |
| Cats | 10 | | | | 10 |
| Other carnivores | 108 | | 233 | | 341 |
| Pigs | 142 | | | 5 | 147 |
| Sheep | 13 | | | 18 | 31 |
| Cattle | 50 | | 382 | | 432 |
| Domestic fowl | 2.853 | | 151 | | 3.004 |
| Total | 12.349 | 6.291 | 169.182 | 1.122 | 188.944 |
| % | 6,54% | 3,33% | 89,54% | 0,59% | 100,00% |

Table 14: Use of animals in routine production purposes

| | Blood based products | Other product types | Total |
|-------------------|----------------------|---------------------|----------------|
| Mice | 1.341 | 102 | 1.443 |
| Rats | 433 | 176 | 609 |
| Guinea-Pigs | 65 | | 65 |
| Mongolian gerbil | | 78 | 78 |
| Rabbits | 66.363 | 869 | 67.232 |
| Cats | 6 | 13 | 19 |
| Dogs | 16 | 18 | 34 |
| Pigs | | 12 | 12 |
| Goats | 46 | | 46 |
| Sheep | 677 | 19 | 696 |
| Cattle | 349 | 15 | 364 |
| Cynomolgus monkey | | 85 | 85 |
| Other Mammals | | 1 | 1 |
| Domestic fowl | 484 | 584 | 1.068 |
| Other birds | 24 | | 24 |
| Other Fish | | 348 | 348 |
| Total | 69.804 | 2.320 | 72.124 |
| % | 96,78% | 3,22% | 100,00% |

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

| | Acute and sub-acute | Skin irritation/corrosion | Skin sensitisation | Repeated dose toxicity | Carcinogenicity | Genotoxicity | Reproductive toxicity | Developmental toxicity | Neurotoxicity | Kinetics | Pharmacodynamics | Ecotoxicity | Safety testing in food and feed area | Target animal safety | Eye irritation/corrosion | Other toxicity/safety testing | Total |
|--------------------------------|---------------------|---------------------------|--------------------|------------------------|-----------------|--------------|-----------------------|------------------------|---------------|----------|------------------|-------------|--------------------------------------|----------------------|--------------------------|-------------------------------|---------------|
| Mice | 2.381 | | 3.883 | 4.082 | 194 | 1.788 | | | | 17.524 | 45.576 | | | 449 | | 172 | 76.049 |
| Rats | 3.050 | 43 | | 12.989 | 600 | 1.298 | 15.888 | 15.758 | 152 | 9.958 | 22.886 | | | | | 544 | 83.166 |
| Guinea-Pigs | 19 | | 2.557 | 15 | | | | | | 45 | 102 | | | | | | 2.738 |
| Hamsters (Syrian) | | 21 | 7 | | | | | | | | | | | | | | 28 |
| Mongolian gerbil | | | | | | | | | | | 125 | | | | | | 125 |
| Rabbits | 21 | 443 | 96 | 187 | | | 726 | 3.601 | | 55 | 790 | | | 55 | 100 | 108 | 6.182 |
| Cats | | | | | | | | | | 126 | | | | 54 | | | 180 |
| Dogs | 66 | | | 769 | | | | | | 667 | 356 | | | 27 | | 4 | 1.889 |
| Horses, donkeys & cross-breeds | | | | | | | | | | | 7 | | | | | | 7 |
| Pigs | | 8 | 30 | 169 | | | | | | 225 | 313 | | 96 | 138 | | 6 | 985 |
| Goats | | | | | | | | | | 36 | | | | 22 | | | 58 |
| Sheep | | | | | | | | | | 80 | | | | 80 | | | 160 |
| Cattle | | | | | | | | | | 184 | | | | 216 | | | 400 |
| Marmoset and tamarins | | | | 124 | | | | | | 26 | | | | | | | 150 |
| Cynomolgus monkey | | | | 1.778 | | | | 213 | | 325 | 28 | | | | | 176 | 2.520 |
| Other Mammals | | | | | | | | | | | | | | 34 | | | 34 |
| Domestic fowl | | | | | | | | | | | | | 1.538 | | | | 1.538 |
| Other birds | 10 | | | | | | | | | | | 256 | | | | | 266 |
| Reptiles | | | | | | | | | | | | | | 5 | | | 5 |
| Xenopus | | | | | | | | | | | | 60 | | | | | 60 |

Versuchstierdaten 2018

| | | | | | | | | | | | | | | | | | |
|-------------------|--------------|--------------|--------------|---------------|--------------|--------------|---------------|---------------|--------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|----------------|
| Zebra fish | 178 | | | | | | | 2.636 | | | | 14.493 | | | | | 17.307 |
| Other Fish | 822 | | | | | | | 1.362 | | 366 | | 7.343 | 225 | | | | 10.118 |
| Total | 6.547 | 515 | 6.573 | 20.113 | 794 | 3.086 | 16.614 | 23.570 | 152 | 29.617 | 70.183 | 22.152 | 1.859 | 1.080 | 100 | 1.010 | 203.965 |
| % | 3,21% | 0,25% | 3,22% | 9,86% | 0,39% | 1,51% | 8,15% | 11,56% | 0,07% | 14,52% | 34,41% | 10,86% | 0,91% | 0,53% | 0,05% | 0,50% | 100,00% |

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

| | up to 28 days | 29 - 90 days | > 90 days | Total |
|-----------------------|---------------|---------------|---------------|----------------|
| Mice | 4.002 | 80 | | 4.082 |
| Rats | 7.800 | 3.353 | 1.836 | 12.989 |
| Guinea-Pigs | | | 15 | 15 |
| Rabbits | 175 | 12 | | 187 |
| Dogs | 527 | 210 | 32 | 769 |
| Pigs | 93 | | 76 | 169 |
| Marmoset and tamarins | 3 | 32 | 89 | 124 |
| Cynomolgus monkey | 412 | 570 | 796 | 1.778 |
| Total | 13.012 | 4.257 | 2.844 | 20.113 |
| % | 64,69% | 21,17% | 14,14% | 100,00% |

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

| | LD50. LC50 | Other lethal methods | Non lethal methods | Total |
|--------------|---------------|----------------------|--------------------|----------------|
| Mice | | 26 | 2.355 | 2.381 |
| Rats | 693 | 189 | 2.168 | 3.050 |
| Guinea-Pigs | | | 19 | 19 |
| Rabbits | | | 21 | 21 |
| Dogs | | | 66 | 66 |
| Other birds | | | 10 | 10 |
| Zebra fish | 116 | | 62 | 178 |
| Other Fish | 822 | | | 822 |
| Total | 1.631 | 215 | 4.701 | 6.547 |
| % | 24,91% | 3,28% | 71,80% | 100,00% |

Table 18: Use of animals in ecotoxicity testing methods

| | Acute toxicity | Chronic toxicity | Endocrine activity | Bioaccumulation | Other ecotoxicity | Total |
|--------------|----------------|------------------|--------------------|-----------------|-------------------|----------------|
| Other birds | 218 | 38 | | | | 256 |
| Xenopus | | | 60 | | | 60 |
| Zebra fish | 7.014 | 6.710 | 370 | 399 | | 14.493 |
| Other Fish | 3.200 | 875 | 360 | 2.868 | 40 | 7.343 |
| Total | 10.432 | 7.623 | 790 | 3.267 | 40 | 22.152 |
| % | 47,09% | 34,41% | 3,57% | 14,75% | 0,18% | 100,00% |

5. Use of species and severity

Table 19: Use of species and severity in total

| | Non-recovery | % | Mild [up to and including] | % | Moderate | % | Severe | % | Total |
|--------------------------------|--------------|--------|----------------------------|---------|----------|--------|---------|--------|------------------|
| Mice | 87.796 | 5,70% | 905.332 | 58,80% | 439.664 | 28,56% | 106.783 | 6,94% | 1.539.575 |
| Rats | 11.673 | 5,24% | 108.396 | 48,65% | 97.667 | 43,83% | 5.075 | 2,28% | 222.811 |
| Guinea-Pigs | 313 | 2,20% | 8.647 | 60,77% | 797 | 5,60% | 4.472 | 31,43% | 14.229 |
| Hamsters (Syrian) | 18 | 1,91% | 694 | 73,83% | 228 | 24,26% | | | 940 |
| Mongolian gerbil | 185 | 5,50% | 1.299 | 38,59% | 1.858 | 55,20% | 24 | 0,71% | 3.366 |
| Other Rodents | 146 | 4,96% | 1.794 | 60,98% | 963 | 32,73% | 39 | 1,33% | 2.942 |
| Rabbits | 25.822 | 30,31% | 57.761 | 67,80% | 1.522 | 1,79% | 88 | 0,10% | 85.193 |
| Cats | 2 | 0,26% | 688 | 89,93% | 75 | 9,80% | | | 765 |
| Dogs | 78 | 1,96% | 3.499 | 87,94% | 389 | 9,78% | 13 | 0,33% | 3.979 |
| Ferrets | | | 74 | 77,89% | 18 | 18,95% | 3 | 3,16% | 95 |
| Other carnivores | | | 110 | 28,28% | 279 | 71,72% | | | 389 |
| Horses, donkeys & cross-breeds | 15 | 1,89% | 776 | 97,98% | 1 | 0,13% | | | 792 |
| Pigs | 2.375 | 12,58% | 13.728 | 72,70% | 2.516 | 13,32% | 264 | 1,40% | 18.883 |
| Goats | | | 444 | 88,98% | 55 | 11,02% | | | 499 |
| Sheep | 130 | 2,74% | 3.729 | 78,49% | 824 | 17,34% | 68 | 1,43% | 4.751 |
| Cattle | | | 7.025 | 96,14% | 277 | 3,79% | 5 | 0,07% | 7.307 |
| Prosimians | | | 63 | 100,00% | | | | | 63 |
| Marmoset and tamarins | | | 48 | 20,96% | 181 | 79,04% | | | 229 |
| Cynomolgus monkey | 3 | 0,10% | 1.251 | 43,51% | 1.621 | 56,38% | | | 2.875 |
| Rhesus monkey | 2 | 3,08% | 31 | 47,69% | 32 | 49,23% | | | 65 |

Versuchstierdaten 2018

| | | | | | | | | | |
|---|----------------|--------------|------------------|---------------|----------------|---------------|----------------|--------------|------------------|
| Vervets Chlorocebus spp. | | | 14 | 100,00% | | | | | 14 |
| Baboons | | | | | | | 10 | 100,00% | 10 |
| Squirrel monkey | | | 20 | 80,00% | 4 | 16,00% | 1 | 4,00% | 25 |
| Other species of Old World Monkeys (Cercopithecoidea) | | | 7 | 100,00% | | | | | 7 |
| Other Mammals | 23 | 1,60% | 1.296 | 90,06% | 108 | 7,51% | 12 | 0,83% | 1.439 |
| Domestic fowl | 216 | 0,94% | 19.929 | 86,41% | 2.808 | 12,18% | 109 | 0,47% | 23.062 |
| Other birds | 151 | 2,06% | 6.254 | 85,31% | 915 | 12,48% | 11 | 0,15% | 7.331 |
| Reptiles | 18 | 11,84% | 38 | 25,00% | 96 | 63,16% | | | 152 |
| Rana | 5 | 0,60% | 829 | 99,40% | | | | | 834 |
| Xenopus | 140 | 5,75% | 2.015 | 82,79% | 279 | 11,46% | | | 2.434 |
| Other Amphibians | 29 | 1,86% | 1.203 | 77,16% | 327 | 20,97% | | | 1.559 |
| Zebra fish | 3.200 | 2,96% | 86.102 | 79,57% | 14.341 | 13,25% | 4.572 | 4,22% | 108.215 |
| Other Fish | 6.337 | 7,56% | 71.294 | 85,05% | 3.045 | 3,63% | 3.149 | 3,76% | 83.825 |
| Cephalopods | | | 55 | 93,22% | | | 4 | 6,78% | 59 |
| Total | 138.677 | 6,48% | 1.304.445 | 60,99% | 570.890 | 26,69% | 124.702 | 5,83% | 2.138.714 |

6. Use of species and genetic status

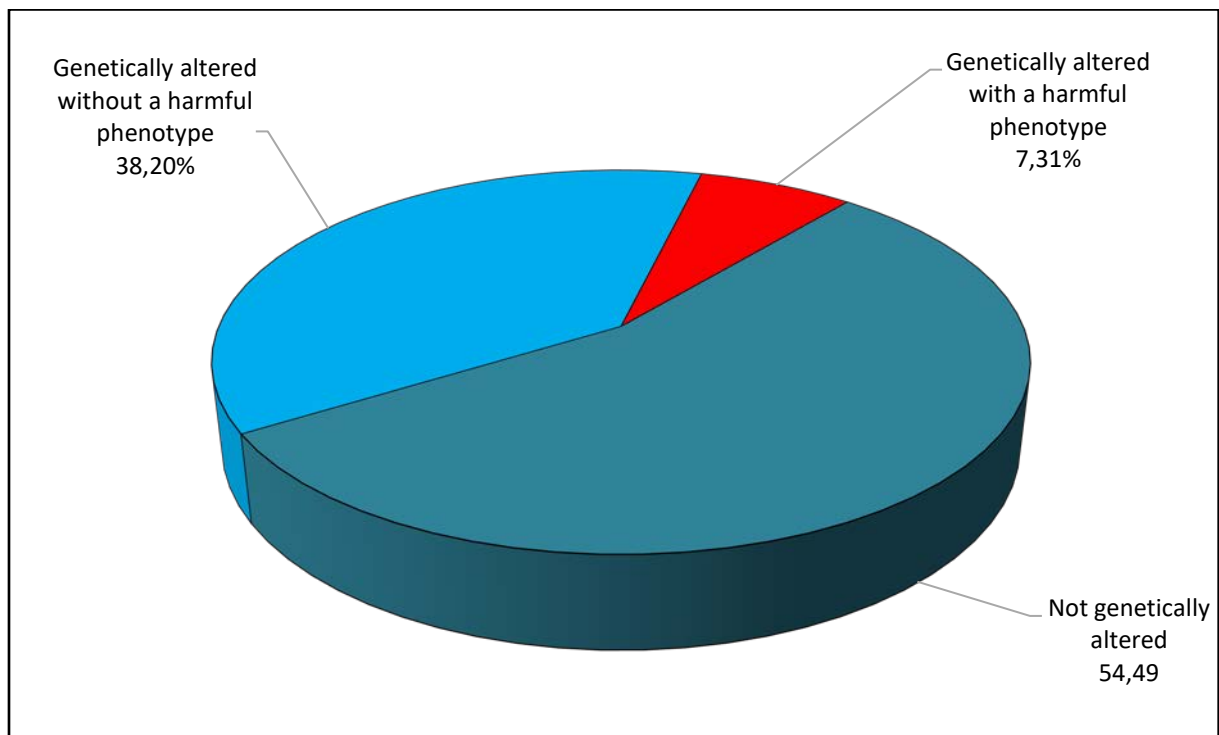
Table 20: Use of species and genetic status in total

| | Not genetically altered | Genetically altered without a harmful phenotype | Genetically altered with a harmful phenotype | Total |
|---|-------------------------|---|--|------------------|
| Mice | 648.806 | 741.151 | 149.618 | 1.539.575 |
| Rats | 213.966 | 5.300 | 3.545 | 222.811 |
| Guinea-Pigs | 14.229 | | | 14.229 |
| Hamsters (Syrian) | 669 | | 271 | 940 |
| Mongolian gerbil | 3.366 | | | 3.366 |
| Other Rodents | 2.942 | | | 2.942 |
| Rabbits | 85.112 | 37 | 44 | 85.193 |
| Cats | 765 | | | 765 |
| Dogs | 3.979 | | | 3.979 |
| Ferrets | 91 | 4 | | 95 |
| Other carnivores | 389 | | | 389 |
| Horses, donkeys & cross-breeds | 792 | | | 792 |
| Pigs | 18.649 | 186 | 48 | 18.883 |
| Goats | 499 | | | 499 |
| Sheep | 4.751 | | | 4.751 |
| Cattle | 7.307 | | | 7.307 |
| Prosimians | 63 | | | 63 |
| Marmoset and tamarins | 229 | | | 229 |
| Cynomolgus monkey | 2.875 | | | 2.875 |
| Rhesus monkey | 65 | | | 65 |
| Vervets Chlorocebus spp. | 14 | | | 14 |
| Baboons | 10 | | | 10 |
| Squirrel monkey | 25 | | | 25 |
| Other species of Old World Monkeys (Cercopithecoidea) | 7 | | | 7 |
| Other Mammals | 1.439 | | | 1.439 |
| Domestic fowl | 22.738 | 324 | | 23.062 |
| Other birds | 7.331 | | | 7.331 |
| Reptiles | 152 | | | 152 |
| Rana | 834 | | | 834 |

Versuchstierdaten 2018

| | | | | |
|-------------------------|------------------|----------------|----------------|------------------|
| Xenopus | 2.419 | 15 | | 2.434 |
| Other Amphibians | 1.122 | 437 | | 1.559 |
| Zebra fish | 39.495 | 65.958 | 2.762 | 108.215 |
| Other Fish | 80.131 | 3.617 | 77 | 83.825 |
| Cephalopods | 59 | | | 59 |
| Total | 1.165.320 | 817.029 | 156.365 | 2.138.714 |
| % | 54,49% | 38,20% | 7,31% | 100,00% |

Figure 4: Use of animals: genetic status



7. Use of Species and re-use

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

| | (Naive) First use | Re-uses | Total |
|---|-------------------|---------------|------------------|
| Mice | 1.516.931 | 22.644 | 1.539.575 |
| Rats | 216.510 | 6.301 | 222.811 |
| Guinea-Pigs | 13.946 | 283 | 14.229 |
| Hamsters (Syrian) | 932 | 8 | 940 |
| Mongolian gerbil | 3.283 | 83 | 3.366 |
| Other Rodents | 2.895 | 47 | 2.942 |
| Rabbits | 81.201 | 3.992 | 85.193 |
| Cats | 556 | 209 | 765 |
| Dogs | 2.108 | 1.871 | 3.979 |
| Ferrets | 69 | 26 | 95 |
| Other carnivores | 389 | | 389 |
| Horses, donkeys & cross-breeds | 431 | 361 | 792 |
| Pigs | 17.624 | 1.259 | 18.883 |
| Goats | 475 | 24 | 499 |
| Sheep | 4.613 | 138 | 4.751 |
| Cattle | 6.828 | 479 | 7.307 |
| Prosimians | 11 | 52 | 63 |
| Marmoset and tamarins | 198 | 31 | 229 |
| Cynomolgus monkey | 2.314 | 561 | 2.875 |
| Rhesus monkey | 51 | 14 | 65 |
| Vervets Chlorocebus spp. | | 14 | 14 |
| Baboons | 10 | | 10 |
| Squirrel monkey | 25 | | 25 |
| Other species of Old World Monkeys (Cercopithecoidea) | | 7 | 7 |
| Other Mammals | 1.423 | 16 | 1.439 |
| Domestic fowl | 22.815 | 247 | 23.062 |
| Other birds | 6.909 | 422 | 7.331 |
| Reptiles | 146 | 6 | 152 |
| Rana | 834 | | 834 |
| Xenopus | 1.464 | 970 | 2.434 |
| Other Amphibians | 1.559 | | 1.559 |
| Zebra fish | 108.215 | | 108.215 |
| Other Fish | 83.410 | 415 | 83.825 |
| Cephalopods | 59 | | 59 |
| Total uses | 2.098.234 | 40.480 | 2.138.714 |

Figure 5: Use of species groups and re-use

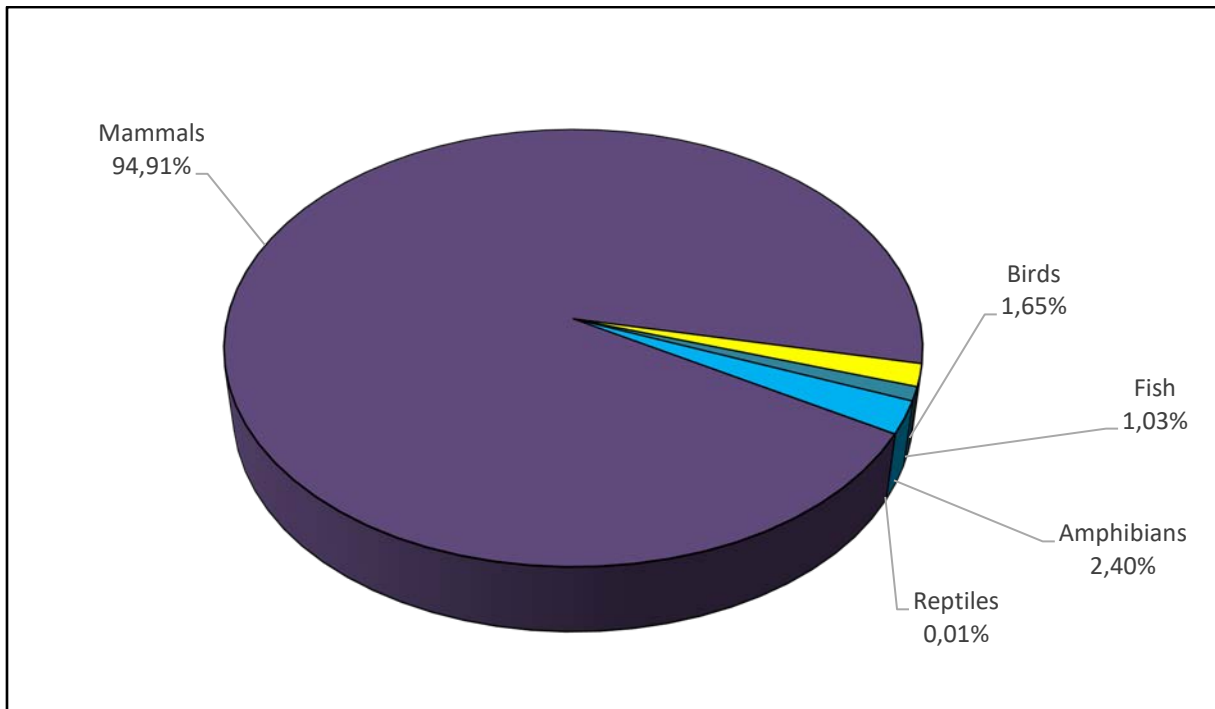
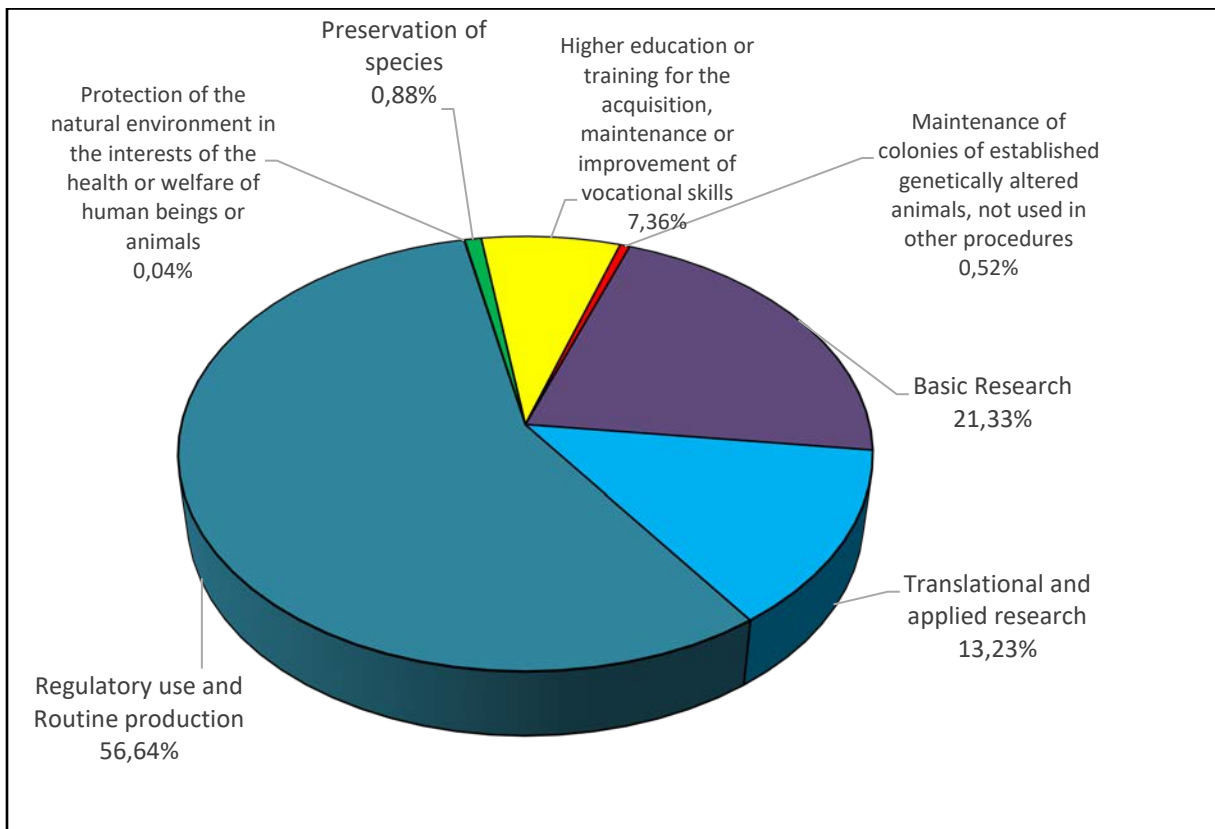


Figure 6: Primary purpose and re-use



8. Purposes and severity

Table 22: Purpose and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|--|----------------|----------------------------|----------------|----------------|------------------|
| Basic Research | 78.050 | 574.387 | 264.184 | 21.135 | 937.756 |
| Translational and applied research | 18.024 | 136.032 | 159.653 | 9.386 | 323.095 |
| Regulatory use and Routine production | 31.297 | 255.281 | 119.008 | 78.668 | 484.254 |
| Protection of the natural environment in the interests of the health or welfare of human beings or animals | | 7.401 | 808 | 80 | 8.289 |
| Preservation of species | | 13.376 | 705 | 7 | 14.088 |
| Higher education or training for the acquisition, maintenance or improvement of vocational skills | 10.761 | 32.778 | 11.685 | 162 | 55.386 |
| Maintenance of colonies of established genetically altered animals, not used in other procedures | 545 | 285.190 | 14.847 | 15.264 | 315.846 |
| Total uses | 138.677 | 1.304.445 | 570.890 | 124.702 | 2.138.714 |
| % | 6,48% | 60,99% | 26,69% | 5,83% | 100,00% |

Table 23: Basic research purposes and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|--|---------------|----------------------------|----------------|---------------|----------------|
| Oncology | 4.597 | 35.975 | 45.713 | 3.129 | 89.414 |
| Cardiovascular Blood and Lymphatic System | 7.748 | 50.710 | 34.785 | 1.194 | 94.437 |
| Nervous System | 18.265 | 107.823 | 56.290 | 5.064 | 187.442 |
| Respiratory System | 3.465 | 9.221 | 6.979 | 435 | 20.100 |
| Gastrointestinal System including Liver | 3.406 | 14.817 | 11.824 | 1.297 | 31.344 |
| Musculoskeletal System | 5.239 | 13.730 | 5.307 | 192 | 24.468 |
| Immune System | 17.084 | 109.187 | 54.021 | 5.030 | 185.322 |
| Urogenital/Reproductive System | 4.479 | 19.024 | 3.744 | 187 | 27.434 |
| Sensory Organs (skin, eyes and ears) | 1.555 | 16.505 | 4.415 | 968 | 23.443 |
| Endocrine System/Metabolism | 1.544 | 46.334 | 12.243 | 558 | 60.679 |
| Multisystemic | 6.674 | 88.808 | 16.204 | 2.349 | 114.035 |
| Ethology / Animal Behaviour / Animal Biology | 3.979 | 59.392 | 3.034 | 34 | 66.439 |
| Other basic research | 15 | 2.861 | 9.625 | 698 | 13.199 |
| Total uses | 78.050 | 574.387 | 264.184 | 21.135 | 937.756 |
| % | 8,32% | 61,25% | 28,17% | 2,25% | 100,00% |

Table 24: Basic research: species and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|--------------------------------|---------------|----------------------------|----------------|---------------|----------------|
| Mice | 67.428 | 415.302 | 239.978 | 18.677 | 741.385 |
| Rats | 3.406 | 14.905 | 10.774 | 2.178 | 31.263 |
| Guinea-Pigs | 22 | 331 | 204 | 4 | 561 |
| Hamsters (Syrian) | | 20 | 16 | | 36 |
| Mongolian gerbil | 130 | 228 | 772 | 4 | 1.134 |
| Other Rodents | 146 | 1.410 | 946 | | 2.502 |
| Rabbits | 12 | 638 | 189 | | 839 |
| Cats | 2 | 84 | 12 | | 98 |
| Dogs | | 225 | 24 | | 249 |
| Ferrets | | 39 | 13 | 3 | 55 |
| Other carnivores | | 2 | | | 2 |
| Horses, donkeys & cross-breeds | | 493 | | | 493 |
| Pigs | 361 | 4.265 | 878 | 1 | 5.505 |
| Sheep | 34 | 77 | 79 | 32 | 222 |
| Cattle | | 4.097 | 48 | | 4.145 |
| Prosimians | | 63 | | | 63 |
| Marmoset and tamarins | | 45 | 22 | | 67 |
| Cynomolgus monkey | | 11 | 8 | | 19 |
| Rhesus monkey | 2 | 14 | 12 | | 28 |
| Other Mammals | 23 | 827 | 62 | | 912 |
| Domestic fowl | 7 | 6.400 | 267 | | 6.674 |
| Other birds | 24 | 5.118 | 726 | | 5.868 |
| Reptiles | | 17 | 96 | 113 | 226 |
| Rana | | 810 | | | 810 |
| Xenopus | 100 | 1.842 | 263 | | 2.205 |
| Other Amphibians | 25 | 211 | 255 | | 491 |
| Zebra fish | 2.858 | 68.391 | 7.760 | 201 | 79.210 |
| Other Fish | 3.470 | 48.521 | 780 | 31 | 52.802 |
| Cephalopods | | 1 | | 4 | 5 |
| Total uses: | 78.050 | 574.387 | 264.184 | 21.135 | 937.756 |

Table 25: Translational and applied research: purposes and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|---|---------------|----------------------------|----------------|--------------|----------------|
| Human Cancer | 2.241 | 21.216 | 96.878 | 1.814 | 122.149 |
| Human Infectious Disorders | 1.603 | 16.733 | 7.225 | 1.554 | 27.115 |
| Human Cardiovascular Disorders | 3.440 | 10.277 | 2.830 | 611 | 17.158 |
| Human Nervous and Mental Disorders | 2.149 | 18.452 | 14.779 | 760 | 36.140 |
| Human Respiratory Disorders | 1.732 | 4.921 | 2.754 | 710 | 10.117 |
| Human Gastrointestinal Disorders including Liver | 82 | 5.759 | 7.874 | 299 | 14.014 |
| Human Musculoskeletal Disorders | 196 | 648 | 1.987 | 323 | 3.154 |
| Human Immune Disorders | 1.444 | 8.212 | 6.373 | 1.360 | 17.389 |
| Human Urogenital/Reproductive Disorders | 285 | 826 | 987 | 78 | 2.176 |
| Human Sensory Organ Disorders (skin, eyes and ears) | 72 | 4.661 | 1.190 | 254 | 6.177 |
| Human Endocrine/Metabolism Disorders | 330 | 14.862 | 2.508 | 31 | 17.731 |
| Other Human Disorders | 126 | 3.400 | 2.332 | 375 | 6.233 |
| Animal Diseases and Disorders | 4.069 | 16.100 | 2.575 | 807 | 23.551 |
| Animal Welfare | 8 | 5.489 | 214 | 26 | 5.737 |
| Diagnosis of diseases | 28 | 1.075 | 3.626 | 384 | 5.113 |
| Plant diseases | | 18 | | | 18 |
| Non-regulatory toxicology and ecotoxicology | 219 | 3.383 | 5.521 | | 9.123 |
| Total | 18.024 | 136.032 | 159.653 | 9.386 | 323.095 |
| % | 5,58% | 42,10% | 49,41% | 2,91% | 100,00% |

Table 26: Translational and applied research: species and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|---|---------------|----------------------------|----------------|--------------|----------------|
| Mice | 11.618 | 90.110 | 142.629 | 8.489 | 252.846 |
| Rats | 2.771 | 15.182 | 10.160 | 580 | 28.693 |
| Guinea-Pigs | 262 | 309 | 330 | 2 | 903 |
| Hamsters (Syrian) | 4 | 471 | 211 | | 686 |
| Mongolian gerbil | | 799 | 1.083 | 20 | 1.902 |
| Other Rodents | | 327 | 17 | 8 | 352 |
| Rabbits | 209 | 535 | 411 | 9 | 1.164 |
| Cats | | 328 | 24 | | 352 |
| Dogs | | 943 | 54 | | 997 |
| Ferrets | | 22 | 4 | | 26 |
| Horses, donkeys & cross-breeds | 14 | 208 | | | 222 |
| Pigs | 618 | 6.002 | 403 | 191 | 7.214 |
| Goats | | 282 | 55 | | 337 |
| Sheep | 32 | 2.624 | 674 | 28 | 3.358 |
| Cattle | | 904 | 180 | 4 | 1.088 |
| Marmoset and tamarins | | 3 | 9 | | 12 |
| Cynomolgus monkey | 3 | 210 | 38 | | 251 |
| Rhesus monkey | | 17 | 20 | | 37 |
| Vervets Chlorocebus spp. | | 14 | | | 14 |
| Baboons | | | | 10 | 10 |
| Squirrel monkey | | 20 | 4 | 1 | 25 |
| Other species of Old World Monkeys (Cercopithecoidea) | | 7 | | | 7 |
| Other Mammals | | 191 | 12 | 12 | 215 |
| Domestic fowl | 66 | 5.924 | 1.456 | 32 | 7.478 |
| Other birds | 49 | 565 | 65 | | 679 |
| Reptiles | 18 | 10 | | | 28 |
| Xenopus | | 25 | | | 25 |
| Zebra fish | | 3.953 | 1.104 | | 5.057 |
| Other Fish | 2.360 | 6.047 | 710 | | 9.117 |
| Total uses: | 18.024 | 136.032 | 159.653 | 9.386 | 323.095 |

Table 27: Regulatory use/routine production purposes and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|--|---------------|----------------------------|----------------|---------------|----------------|
| Routine production | 26.031 | 47.551 | 106 | 1 | 73.689 |
| Quality control (incl batch safety and potency testing) | 138 | 63.562 | 57.345 | 67.899 | 188.944 |
| Other efficacy and tolerance testing | 505 | 7.470 | 9.002 | 679 | 17.656 |
| Toxicity and other safety testing including pharmacology | 4.623 | 136.698 | 52.555 | 10.089 | 203.965 |
| Total | 31.297 | 255.281 | 119.008 | 78.668 | 484.254 |
| % | 6,46% | 52,72% | 24,58% | 16,25% | 100,00% |

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

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|--------------------------------|---------------|----------------------------|----------------|---------------|----------------|
| Mice | 2.871 | 90.233 | 33.076 | 64.894 | 191.074 |
| Rats | 2.408 | 73.518 | 74.397 | 1.608 | 151.931 |
| Guinea-Pigs | | 7.653 | 263 | 4.466 | 12.382 |
| Hamsters (Syrian) | | 188 | | | 188 |
| Mongolian gerbil | | 203 | | | 203 |
| Other Rodents | | 9 | | 31 | 40 |
| Rabbits | 25.552 | 56.401 | 893 | 79 | 82.925 |
| Cats | | 225 | 38 | | 263 |
| Dogs | 78 | 1.707 | 311 | 13 | 2.109 |
| Other carnivores | | 108 | 279 | | 387 |
| Horses, donkeys & cross-breeds | | 6 | 1 | | 7 |
| Pigs | 343 | 1.496 | 1.168 | | 3.007 |
| Goats | | 104 | | | 104 |
| Sheep | | 835 | 52 | | 887 |
| Cattle | | 1.192 | 49 | 1 | 1.242 |
| Marmoset and tamarins | | | 150 | | 150 |
| Cynomolgus monkey | | 1.030 | 1.575 | | 2.605 |
| Other Mammals | | 1 | 34 | | 35 |
| Domestic fowl | 38 | 5.926 | 546 | 77 | 6.587 |
| Other birds | | 243 | 36 | 11 | 290 |
| Reptiles | | 5 | | | 5 |
| Xenopus | | 60 | | | 60 |
| Zebra fish | 7 | 7.473 | 5.457 | 4.370 | 17.307 |
| Other Fish | | 6.665 | 683 | 3.118 | 10.466 |
| Total uses: | 31.297 | 255.281 | 119.008 | 78.668 | 484.254 |

Table 29: Quality control purposes and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|------------------------|--------------|----------------------------|---------------|---------------|----------------|
| Batch safety testing | 138 | 11.318 | 843 | 50 | 12.349 |
| Pyrogenicity testing | | 6.183 | 108 | | 6.291 |
| Batch potency testing | | 44.968 | 56.365 | 67.849 | 169.182 |
| Other quality controls | | 1.093 | 29 | | 1.122 |
| Total | 138 | 63.562 | 57.345 | 67.899 | 188.944 |
| % | 0,07% | 33,64% | 30,35% | 35,94% | 100,00% |

Table 30: Routine production purposes and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|----------------------|---------------|----------------------------|--------------|--------------|----------------|
| Blood based products | 25.963 | 43.807 | 34 | | 69.804 |
| Other product types | 68 | 2.199 | 52 | 1 | 2.320 |
| Total | 26.031 | 46.006 | 86 | 1 | 72.124 |
| % | 36,09% | 63,79% | 0,12% | 0,00% | 100,00% |

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

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|--|--------------|----------------------------|---------------|---------------|----------------|
| Acute and sub-acute | | 4.567 | 492 | 1.488 | 6.547 |
| Skin irritation/corrosion | | 452 | 63 | | 515 |
| Skin sensitisation | | 5.481 | 1.024 | 68 | 6.573 |
| Eye irritation/corrosion | | 58 | 42 | | 100 |
| Repeated dose toxicity | 45 | 10.533 | 9.321 | 214 | 20.113 |
| Carcinogenicity | | 482 | 194 | 118 | 794 |
| Genotoxicity | 1 | 2.777 | 256 | 52 | 3.086 |
| Reproductive toxicity | | 15.640 | 966 | 8 | 16.614 |
| Developmental toxicity | | 18.972 | 517 | 4.081 | 23.570 |
| Neurotoxicity | | 40 | 112 | | 152 |
| Kinetics | 478 | 21.850 | 7.191 | 98 | 29.617 |
| Pharmaco-dynamics (incl safety pharmacology) | 4.065 | 39.102 | 25.702 | 1.314 | 70.183 |
| Ecotoxicity | 7 | 13.392 | 6.166 | 2.587 | 22.152 |
| Safety testing in food and feed area | | 1.643 | 216 | | 1.859 |
| Target animal safety | | 946 | 76 | 58 | 1.080 |
| Other toxicity/safety testing | 27 | 763 | 217 | 3 | 1.010 |
| Total uses | 4.623 | 136.698 | 52.555 | 10.089 | 203.965 |
| % | 2,27% | 67,02% | 25,77% | 4,95% | 100,00% |

Table 32: Repeated dose toxicity testing methods and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|---------------|--------------|-------------------------------|---------------|--------------|----------------|
| up to 28 days | 45 | 7.632 | 5.126 | 209 | 13.012 |
| 29 - 90 days | | 2.500 | 1.753 | 4 | 4.257 |
| > 90 days | | 401 | 2.442 | 1 | 2.844 |
| Total | 45 | 10.533 | 9.321 | 214 | 20.113 |
| % | 0,22% | 52,37% | 46,34% | 1,06% | 100,00% |

Table 33: Acute and subacute toxicity testing methods and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|----------------------|--------------|-------------------------------|--------------|---------------|----------------|
| LD50. LC50 | | 63 | 317 | 1.251 | 1.631 |
| Other lethal methods | | 84 | | 131 | 215 |
| Non lethal methods | | 4.420 | 175 | 106 | 4.701 |
| Total | 0 | 4.567 | 492 | 1.488 | 6.547 |
| % | 0,00% | 69,76% | 7,51% | 22,73% | 100,00% |

Table 34: Ecotoxicity testing methods and severity

| | Non-recovery | Mild [up to and including] | Moderate | Severe | Total |
|--------------------|--------------|-------------------------------|---------------|---------------|----------------|
| Acute toxicity | 7 | 7.706 | 261 | 2.458 | 10.432 |
| Chronic toxicity | | 1.959 | 5.598 | 66 | 7.623 |
| Endocrine activity | | 727 | | 63 | 790 |
| Bioaccumulation | | 2.974 | 293 | | 3.267 |
| Other ecotoxicity | | 26 | 14 | | 40 |
| Total | 7 | 13.392 | 6.166 | 2.587 | 22.152 |
| % | 0,03% | 60,46% | 27,83% | 11,68% | 100,00% |

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 testing) | Other efficacy and tolerance testing | Toxicity and other safety testing including phar- macology | Routine production | Total |
|---|--|--|---|-----------------------|----------------|
| Legislation on medicinal prod- ucts for human use | 177.233 | 13.898 | 120.511 | 26.711 | 338.353 |
| Legislation on medicinal prod- ucts for veterinary use and their resi- dues | 11.431 | 2.999 | 3.618 | 1.728 | 19.776 |
| Medical devices legislation | 203 | 161 | 7.680 | 41.680 | 49.724 |
| Industrial chemi- cals legislation | | | 38.500 | 480 | 38.980 |
| Plant protection product legislation | | | 30.216 | 10 | 30.226 |
| Biocides legislati- on | | 426 | | 94 | 520 |
| Food legislation including food contact material | | | 510 | | 510 |
| Feed legislation including legisla- tion for the safety of target animals. workers and envi- ronment | 18 | 21 | 1.913 | | 1.952 |
| Other legislation | 59 | 151 | 1.017 | 2.986 | 4.213 |
| Total | 188.944 | 17.656 | 203.965 | 73.689 | 484.254 |

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 | 161.714 | 8.322 | 1.099 | 6.098 | 177.233 |
| Legislation on medicinal products for veterinary use and their residues | 7.409 | 4.014 | | 8 | 11.431 |
| Medical devices legislation | | 13 | 5 | 185 | 203 |
| Feed legislation including legislation for the safety of target animals, workers and environment | | | 18 | | 18 |
| Other legislation | 59 | | | | 59 |
| Total | 169.182 | 12.349 | 1.122 | 6.291 | 188.944 |

Table 37: Routine production purposes: type of legislation

| | Blood based products | Other product types | Total |
|---|----------------------|---------------------|---------------|
| Legislation on medicinal products for human use | 26.542 | 169 | 26.711 |
| Legislation on medicinal products for veterinary use and their residues | 1.728 | | 1.728 |
| Medical devices legislation | 41.528 | 56 | 41.584 |
| Industrial product legislation | | 155 | 155 |
| Plant protection product legislation | | 10 | 10 |
| Biocides legislation | | 94 | 94 |
| Other legislation | 6 | 1.836 | 1.842 |
| Total of uses: | 69.804 | 2.320 | 72.124 |

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 | 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 | 1.939 | | 2.101 | 1.326 | 1.136 | 30 | | 15 | 6.547 |
| Skin irritation/corrosion | 18 | | 351 | 125 | 18 | | | 3 | 515 |
| Skin sensitisation | 1.458 | | 3.025 | 1.701 | 389 | | | | 6.573 |
| Eye irritation/corrosion | | | 30 | 31 | 39 | | | | 100 |
| Repeated dose toxicity | 14.571 | 240 | 26 | 3.577 | 1.387 | 312 | | | 20.113 |
| Carcinogenicity | 194 | | | | 600 | | | | 794 |
| Genotoxicity | 908 | 96 | 88 | 647 | 1.347 | | | | 3.086 |
| Reproductive toxicity | 1.110 | | | 11.965 | 3.371 | 168 | | | 16.614 |
| Developmental toxicity | 275 | | 575 | 8.638 | 14.082 | | | | 23.570 |
| Neurotoxicity | | | | | 152 | | | | 152 |
| Kinetics | 27.230 | 1.558 | | 144 | 685 | | | | 29.617 |
| Pharmaco-dynamics (incl safety pharmacology) | 69.576 | 531 | 48 | | | | | 28 | 70.183 |
| Ecotoxicity | 2.674 | 122 | 1.339 | 10.346 | 6.971 | | 54 | 646 | 22.152 |
| Safety testing in food and feed area | | | | | | | 1.859 | | 1.859 |
| Target animal safety | | 1.041 | | | 39 | | | | 1.080 |
| Other toxicity/safety testing | 558 | 30 | 97 | | | | | 325 | 1.010 |
| Total of uses: | 120.511 | 3.618 | 7.680 | 38.500 | 30.216 | 510 | 1.913 | 1.017 | 203.965 |

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 | 9.854 | 2.603 | 2.114 | 14.571 |
| Legislation on medicinal products for veterinary use and their residues | 240 | | | 240 |
| Medical devices legislation | 26 | | | 26 |
| Industrial chemicals legislation | 1.513 | 1.334 | 730 | 3.577 |
| Plant protection product legislation | 1.307 | 80 | | 1.387 |
| Food legislation including food contact material | 72 | 240 | | 312 |
| Total of uses: | 13.012 | 4.257 | 2.844 | 20.113 |

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 | | 26 | 1.913 | 1.939 |
| Medical devices legislation | | | 2.101 | 2.101 |
| Industrial chemicals legislation | 703 | 9 | 614 | 1.326 |
| Plant protection product legislation | 928 | 150 | 58 | 1.136 |
| Food legislation including food contact material | | 30 | | 30 |
| Other legislation | | | 15 | 15 |
| Total of uses: | 1.631 | 215 | 4.701 | 6.547 |

Table 41: Ecotoxicity purposes: type of legislation

| | Acute toxicity | Chronic toxicity | Endocrine activity | Bioaccumulation | Other ecotoxicity | Total |
|--|----------------|------------------|--------------------|-----------------|-------------------|---------------|
| Legislation on medicinal products for human use | 9 | 2.476 | | 189 | | 2.674 |
| Legislation on medicinal products for veterinary use and their residues | 122 | | | | | 122 |
| Medical devices legislation | 840 | | | 499 | | 1.339 |
| Industrial chemicals legislation | 4.782 | 4.394 | 200 | 970 | | 10.346 |
| Plant protection product legislation | 4.005 | 753 | 590 | 1.609 | 14 | 6.971 |
| Feed legislation including legislation for the safety of target animals, workers and environment | 54 | | | | | 54 |
| Other legislation | 620 | | | | 26 | 646 |
| Total | 10.432 | 7.623 | 790 | 3.267 | 40 | 22.152 |

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 | 182.239 | 17.507 | 200.761 | 71.631 | 472.138 |
| Legislation satisfying national requirements only [within EU] | 1.316 | 149 | 1.159 | 2.058 | 4.682 |
| Legislation satisfying Non-EU requirements only | 5.389 | | 2.045 | | 7.434 |
| Total | 188.944 | 17.656 | 203.965 | 73.689 | 484.254 |

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 | 6.462 | 15 | 70 | 6.547 |
| Skin irritation/corrosion | 472 | | 43 | 515 |
| Skin sensitisation | 6.287 | | 286 | 6.573 |
| Eye irritation/corrosion | 100 | | | 100 |
| Repeated dose toxicity | 19.307 | | 806 | 20.113 |
| Carcinogenicity | 794 | | | 794 |
| Genotoxicity | 3.086 | | | 3.086 |
| Reproductive toxicity | 16.614 | | | 16.614 |
| Developmental toxicity | 23.570 | | | 23.570 |
| Neurotoxicity | 152 | | | 152 |
| Kinetics | 29.574 | | 43 | 29.617 |
| Pharmaco-dynamics (incl safety pharmacology) | 69.436 | 283 | 464 | 70.183 |
| Ecotoxicity | 21.042 | 857 | 253 | 22.152 |
| Safety testing in food and feed area | 1.859 | | | 1.859 |
| Target animal safety | 1.000 | | 80 | 1.080 |
| Other toxicity/safety testing | 1.006 | 4 | | 1.010 |
| Total | 200.761 | 1.159 | 2.045 | 203.965 |

Table 44: Repeated dose toxicity: origin of legislative requirement

| | up to 28 days | 29 - 90 days | > 90 days | Total |
|---|---------------|--------------|--------------|---------------|
| Legislation satisfying EU requirements | 12.896 | 3.942 | 2.469 | 19.307 |
| Legislation satisfying national requirements only [within EU] | | | | |
| Legislation satisfying national requirements only [within EU] | 116 | 315 | 375 | 806 |
| Total | 13.012 | 4.257 | 2.844 | 20.113 |

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

| | LD50. LC50 | Other lethal methods | Non lethal methods | Total |
|---|--------------|----------------------|--------------------|--------------|
| Legislation satisfying EU requirements | 1.591 | 185 | 4.686 | 6.462 |
| Legislation satisfying national requirements only [within EU] | | | 15 | 15 |
| Legislation satisfying national requirements only [within EU] | 40 | 30 | | 70 |
| Total | 1.631 | 215 | 4.701 | 6.547 |

Table 46: Ecotoxicity testing: origin of legislative requirement

| | Acute toxicity | Chronic toxicity | Endocrine activity | Bioaccumulation | Other ecotoxicity | Total |
|---|----------------|------------------|--------------------|-----------------|-------------------|---------------|
| Legislation satisfying EU requirements | 9.528 | 7.623 | 790 | 3.087 | 14 | 21.042 |
| Legislation satisfying national requirements only [within EU] | 831 | | | | 26 | 857 |
| Legislation satisfying Non-EU requirements only | 73 | | | 180 | | 253 |
| Total | 10.432 | 7.623 | 790 | 3.267 | 40 | 22.152 |

11. Animals used under § 4 (3) of the Animal Protection Act by speciesTable 47: Animals used by species

| Animal Species | Number of Animals | % |
|--------------------------------|-------------------|----------------|
| Mice | 563.844 | 82,15 |
| Rats | 70.804 | 10,32 |
| Guinea-Pigs | 684 | 0,10 |
| Hamsters (Syrian) | 92 | 0,01 |
| Mongolian gerbil | 1.201 | 0,17 |
| Other Rodents | 883 | 0,13 |
| Rabbits | 452 | 0,07 |
| Dogs | 14 | 0,00 |
| Ferrets | 6 | 0,00 |
| Horses, donkeys & cross-breeds | 19 | 0,00 |
| Pigs | 911 | 0,13 |
| Goats | 58 | 0,02 |
| Sheep | 8 | 0,00 |
| Cattle | 135 | 0,02 |
| Marmoset and tamarins | 23 | 0,00 |
| Cynomolgus monkey | 3 | 0,00 |
| Rhesus monkey | 10 | 0,00 |
| Other Mammals | 162 | 0,02 |
| Domestic fowl | 8.766 | 1,28 |
| Other birds | 586 | 0,09 |
| Reptiles | 164 | 0,02 |
| Rana | 9 | 0,00 |
| Xenopus | 1.835 | 0,27 |
| Other Amphibians | 289 | 0,04 |
| Zebra fish | 25.184 | 3,67 |
| Other Fish | 10.210 | 1,49 |
| Total | 686.352 | 100,00% |