



Documentation of the data model for animal experimentation

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Version 1.0

Version number explanation: The first number represents a major revision (large or breaking changes). The second number represents a minor revision (small updates or improvements that remain backward compatible).

In Switzerland, animal experimentation requires an authorization (license) from the cantonal authorities. Researchers are required to submit a report for each calendar year to the cantonal veterinary office via the animex-ch information system, no later than the end of February of the following year, for each animal research license for which they are responsible (annual report). Once the license is completed, they must also provide a final report about the experiments performed and the animals used. The cantonal veterinary offices review these reports and forward them to the Federal Food Safety and Veterinary Office (FSVO). The FSVO, as the competent federal authority under Article 36 of the Animal Welfare Act (SR 455), is responsible for publishing an annual statistic that records all animal experiments and provides the necessary information to assess the application of animal welfare legislation. In addition, after the completion of animal experiments, the FSVO is tasked under Art 20a of the Animal Welfare Act, with publishing the key information regarding these experiments. This information not only refers to the number of animals used during the whole duration of the license (up to 3 years), but also the project title, the purpose of the experiment, and the severity category.

In addition, the FSVO makes the raw data available as open government data. This document describes the data models of the raw data.

Download raw data: <https://opendata.swiss>

View the data in the [dashboard of the FSVO](#)

This reporting is currently carried out by many individuals from Institutes using the so-called **AC Reports** in animex-ch, the new system that replaced the previous e-tierversuche platform in the second half of 2020. The information submitted is first checked by the cantonal veterinary offices using expert knowledge and validation formulas to make sure it is accurate. Then, the FSVO reviews it a second time, using an automated system and a sample-based review. For more information on the current validation formulas, please refer to [the explanatory notes for the AC Reports](#).

The AC reports are automatically generated at the end of each calendar year (or, for last annual reports, at the license expiry date) within the animex-ch system. These reports are based on the number of animal species approved under each license, and a single license may cover multiple species. Each species is reported separately in the AC reports. From this perspective, it is important to note that the data provided below represents a summation of all animal species from all reports from all licenses since 1997. Each row corresponds to a single animal species, reported in one experiment, along with its specific characteristics (such as genetic status), the number of animals used in the experiment during that year (including severity degrees), and additional information about the context of the experiment (such as type of research and institution type). For example: The AC report for License No. XYZ from 2024 includes four approved species: mice, rats, guinea pigs, and rabbits. In the dataset, this license will appear as four separate rows: one for each animal species.

In a similar manner, the heads of the animal facilities are required to submit, for each calendar year, to the cantonal veterinary office via the animex-ch information system, no later than the end of February of the following year, the number of animals bred, born, or imported into the laboratory animal facilities during the previous year. These numbers are plausibility-checked in the same way as described above and are published as statistics for the laboratory animal facilities. Of important note, this refers only to the laboratory animal facilities authorized according to the definition from the Animal Welfare Ordinance (SR 455.1), Art. 2, Para. 3, Let. m. and Art. 122 of the same Ordinance. Animals bred in conventional animal facilities and used in animal experiments (such as farm animals bred on farms for example) are not included in the present statistics for laboratory animal facilities.

This reporting is currently carried out by many individuals from laboratory animal facilities using the so-called **HC Reports** in animex-ch. For more information on the current structure of the HC Reports, please refer to [the explanatory notes for the HC Reports](#).

Dataset(s) pertaining to the animal experimentation statistics

 <https://opendata.swiss/en/dataset/tierversuche-tierversuchsstistik>

This dataset contains the raw data of the animal uses in experiments since 1997. The numbers for uses, categorized by severity degree, correspond to [sections 11.1 to 11.4 of the AC Report](#) and indicate the number of experimental uses. An experimental use refers to using one animal for one scientific or educational purpose. The use begins when the first procedure is performed on the animal and ends when data collection, observations, or the educational goal is complete. Typically, this involves one experiment, test, or training activity. One use may include several related procedures, as long as they all contribute to the same objective and involve the same animal. As an example, in a hypothetical training setting involving large animals, one cow can be manipulated several times by the students in the frame of the same use. Repeated use means the same animal is used in more than one separate experiment, test, or training activity, each with its own distinct purpose in the same license and calendar year. A classic example is seen in pharmacokinetic studies with rodents, where animals from the control group may first be serve as controls and later, within the same license but as part of a different study with other series of events, used as an experimental group.

animal_experimentation_statistics.csv

Attribute	Explanation
Year	Reporting year of the AC Report
Canton	Primary canton of the AC Report
Id Of Animal Category	Refers to the animal species used. See (..)animal_category.csv for possible values and translations.
Genetically Modified	Refers to the genetic status of the animal. See (..)genetically_modified.csv for possible values and translations.
Degree of severity 0	Indicates the number of animal uses retrospectively reported in severity degree 0.
Degree of severity 1	Indicates the number of animal uses retrospectively reported in severity degree 1.
Degree of severity 2	Indicates the number of animal uses retrospectively reported in severity degree 2.
Degree of severity 3	Indicates the number of animal uses retrospectively reported in severity degree 3.
Id Experiment Category	The main area of application to which the experimental uses relate. See (..)experiment_cat.csv for possible values and translations.
Id Of Disease Category	The association with diseases or disorders of the experimental uses. See (..)disease_cat.csv for possible values and translations.
Id Of Institute	Indicates the type of institute in which the experiment was carried out. See (..)institute_id.csv for possible values and translations.
Id Of Legal Restriction	Indicates the single regulatory category (per international or Swiss requirements) under which each experimental use is reported. See (..)legal_id.csv for possible values and translations.
Number Of Animals Used For The First Time	Indicates the number of animals used for the first time, refers to single uses of animals.

Dataset(s) pertaining to the animal experiment authorizations (licenses)

 <https://opendata.swiss/en/dataset/tierversuche-bewilligungen>

These datasets contain the number of animal experiment authorizations (licenses) issued by the cantonal veterinary offices. The data are structured in the various datasets according to different criteria, as follows: **valid license** refers to an approval recorded by the cantonal authority in animex-ch that was in effect during the reporting year and is the sum of active and inactive licences. An **active license** is a valid license for which an annual report has been submitted to the FSVO and for which more than zero animal uses were reported during the reporting year. An **inactive license** is a valid license for which an annual report has been submitted to the FSVO and does not report any animal uses. A **newly issued license** is an animal experiment that has been registered by the cantonal authority in animex-ch during the reporting year, either as a new license (N) or as a renewal (continuation) license (R), with the prospective severity level noted at the time the license was granted. A **rejected license application** refers to any application for a new or a renewal license that was denied by the cantonal authority during the reporting year.

licences.csv

Attribute	Explanation
Year	Indicates the year in which the cantonal authority made the decision to authorize the animal experiment. This should be distinguished from the year in which the license becomes valid. For example, a license may be approved by the canton in December but only become valid in January, either due to the FSVO appeal period or at the researchers' request to start later. In such cases, the license is counted in the statistics for the year in which the cantonal decision was made (e.g., December).
Degree of severity	The highest prospective severity degree of the license. The severity degrees are assigned both prospectively and retrospectively. Prospectively , meaning before the experiment begins, the highest expected severity level is assigned to the experiment as a whole (to be found in licences.csv). After the experiment is completed, that is, retrospectively, the actual burden on each individual animal is determined (to be found in animal_experimentation_statistics.csv)
Type	Indicates the license type. See licences_codelist_type.csv for possible values and translations. The possible types are the following: NEW = New License (N). A new license is the first permit for an experiment on a specific topic/objective or using a specific experimental method. There is no formal connection with previous applications. CONTINUATION = a Renewal License (R). A Renewal license is a renewal of the permit for an experiment with the same objective and the same or a slightly modified method in order to continue an experiment for which the permit has expired. ACTIVE = Active license: Valid license with an annual report submitted to the FSVO, reporting >0 animal uses in the reporting year. INACTIVE = Inactive license: Valid license with an annual report submitted to the FSVO, reporting 0 animal uses in the reporting year. The sum of active and inactive licenses / year is the number of valid licenses / year.

	<p>REKURS = Number of licence applications appealed by the FSVO during the reporting year</p> <p>ABGELEHNT = Number of licence applications rejected by the canton during the reporting year</p>
Count	Indicates the number of licenses.
Canton	The abbreviation of the canton or of the primary canton in which the experiment was carried out. In the case of intercantonal experiments, the application is to be submitted to the canton where the experiments are mainly conducted, referred to in this situation as the “primary canton.”

Dataset(s) pertaining to the laboratory animal facilities

 <https://opendata.swiss/en/dataset/tierversuche-versuchstierhaltungen>

These datasets contain the number of animals born or imported into Swiss laboratory animal facilities. The data is aggregated from the HC Reports received during the reporting year. The figures from the laboratory animal facility statistics are not directly comparable with those from the animal experiment statistics. Laboratory animals can be kept for several years and may only be used in experiments at a later stage than the year they were born. Animals in breeding are only counted in the first year after birth or import. Moreover, not all laboratory animals originate from animal facilities, such as poultry. In particular, for genetically modified animals, more animals are often bred than are used in experiments, since not all offspring display the required characteristics. Some animals are also kept exclusively for breeding purposes

animal_facilities.csv

Attribute	Explanation
Year	Reporting year of the HC Report
Category	<p>See animal_facilities_codelist_categories.csv for the possible values and translations.</p> <p>Category Definitions ANIMALS_USED = Number of animal uses in animal experiments (aggregated from animal_experimentation_statistics.csv). BRED = Number of animals bred in Swiss Laboratory Animal Facilities. IMPORTED = Number of animals imported into Switzerland. FISH_TOTAL, MICE_TOTAL, RATS_TOTAL, OTHER_TOTAL = Breakdown of animals bred or imported by species group. MICE_GEN_ENGINEERED, RATS_GEN_ENGINEERED, FISH_GEN_ENGINEERED = Subsets of the corresponding species totals, restricted to genetically engineered animals.</p> <p>Summation Rules $BRED + IMPORTED = TOTAL$ animals bred or imported into Switzerland. $FISH_TOTAL + MICE_TOTAL + RATS_TOTAL + OTHER_TOTAL = TOTAL$ animals bred or imported into Switzerland (species breakdown of the same total).</p> <p>Genetically engineered categories (*_GEN_ENGINEERED) are subsets of their respective species totals, and are not additional categories to be summed separately.</p>
Count	Indicates the number of animals.
Canton	Canton of the laboratory animal facility where animals were born and/or imported.

Dataset(s) pertaining to the completed animal experiment authorizations (licences)

 <https://opendata.swiss/en/dataset/tierversuche-abgeschlossene-versuche>

This dataset contains the lists of published completed animal experiments (licences) since 2021. The dataset of completed animal experiments from 2014 to 2020 is provided as a separate set of files. **Of important note**, the annual statistics under Article 36 of the Animal Welfare Act record animal experiments conducted within a calendar year (available in the dataset: *animal_experimentation_statistics.csv*). Animals that remain in an experiment beyond the turn of the year are therefore counted in the annual statistics of multiple years. It is thus important to distinguish between the annual statistics and the publication of completed experiments. In the annual statistics, which have been published for more than 30 years, the number of uses of animals in experiments is recorded for the period of one calendar year (1 January to 31 December). In the publication of completed experiments, the number of animals corresponds to the entire duration of the completed license (up to 3 years). Except for the animal numbers used throughout the duration of the license, the published information required under Art. 20a is exported from Form A, the license application for animal experiments, once the license has been completed. For more information on Form A, [please consult the explanatory notes](#).

completed_experiments_since_2021.csv

Attribute	Explanation
reporting year	The year in which the licence was completed or terminated by the owner or the canton
title	Project / scientific title of the license. This corresponds to Section 05 of Form A.
field of expertise	Scientific discipline in which the research question was addressed. This corresponds to Section 15 of Form A.
area of application	Area of application within which the study question was situated. This corresponds to Section 16 of Form A.
animal category	Animal species approved for use within the license and research question. A license may include one or more species or groups (e.g. wild type and genetically modified). This corresponds to Section 09 of Form A.
number of severity level 0	Total use of an animal group or species over the entire duration of the license in severity degree 0.
number of severity level 1	Total use of an animal group or species over the entire duration of the license in severity degree 1.
number of severity level 2	Total use of an animal group or species over the entire duration of the license in severity degree 2.
number of severity level 3	Total use of an animal group or species over the entire duration of the license in severity degree 3.
id	Anonymized numerical ID of license application.