

Alternative methods to the Draize Test for Eye Irritation Testing

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The Draize test for eye irritation testing is used since decades. Here the substance under investigation is applied to the eyes of a rabbit and - depending on the resulting irritation – assigned to one out of three irritation categories. The United Nations Globally Harmonized System (UN GHS) categories are non-irritating or not classified (UN GHS: No category), reversible eye effects (UN GHS: Category 2) and irreversible eye effects (UN GHS: Category 1). Alternative methods exist for identification of no category and category 1 substances [1]. However, there is no validated method available to identify category 2 substances. This lack in methods results in an ongoing use of the Draize test in the European Union. Figure 1 displays data from Germany and the European Union (extended from [2] – updated data from the European Union will be published at the end of 2019).

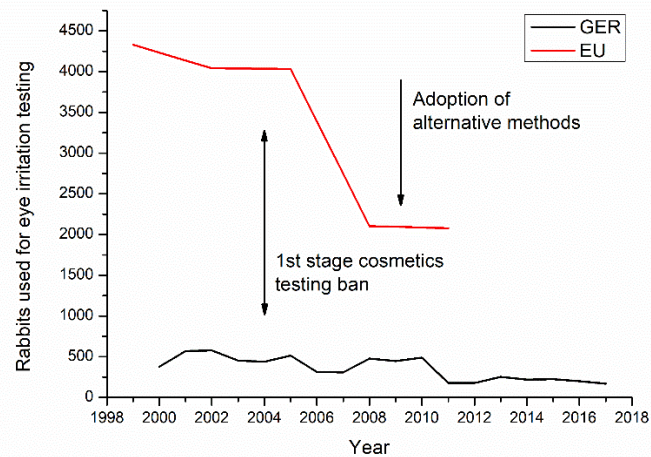


Figure 1. Numbers of rabbits used for eye irritation testing between 1998 and 2017 in Germany and the European Union.

In the presentation an alternative method - based on the intelligent mobile lab for *in-vitro* diagnostic (IMOLA-IVD) (Figure 2) - to determine the eye irritation potential of substances will be described in detail [3] and options to determine also category 2 substances will be discussed [4,5].

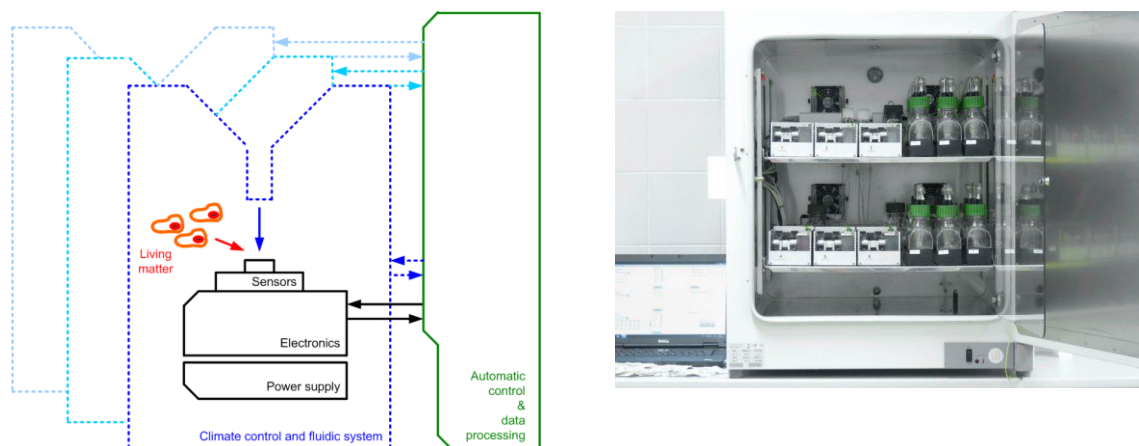


Figure 2. Intelligent mobile lab for in-vitro diagnostic (IMOLA-IVD). Left: principle, right: laboratory system.

References:

