



National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

Educational material for addressing *Safe-by-Design in biotechnology*



RIVM has made a set of educational materials that help students to get a grasp on safety in the field of biotechnology and on the Safe-by-Design strategy. Part of this material is also helpful for applying this strategy in your own (future) biotechnology projects, like a MSc thesis or PhD project.

Safe-by-Design

Safe-by-Design (SbD) refers to a comprehensive safety approach in which safety perspectives are considered early on in the innovation process, and all the way through: from development to production, to use, recycling and waste. By addressing SbD, we expect students and researchers in the life sciences to develop a broader perspective. They gain insight in safety but also learn about how socio-economic and societal factors can have an impact on the perception of safety of modern biotechnology.

About the material

The material consists of a serious game, a webinar, five cases and a safety framework. Each of our materials has a particular focus and uses a different method of working. In general the material can be used flexible and tailored to the needs and circumstances. All our materials are free of use.



“It gave us the insight that safety is much broader than science alone.”

Participants iGEM Leiden

Serious Game

This game challenges students by broadening safety awareness and providing challenging safety considerations of a technical, societal, social, ethical and legal nature. The students will discuss this with each other in search of creative ways to tackle the challenges.

Webinar

The webinar provides a good starting point for students to incorporate SbD into their projects right from the start. The webinar offers background information on the importance of SbD and hands a method that systematically helps to identify and address safety issues. The webinar addresses iGEM projects specifically, but integration in a MSc or PhD course is also possible.

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Case material

The case material is presented as in depth material for students and researchers to help address a range of safety issues, and apply SbD in the field of biotechnology. Five cases intended to stimulate group discussions, are available in different fields of biotechnology.



Safety framework

The Safety Framework document will help students and researchers understand why the environmental safety aspect of biotechnology is important. It explains how you can assess safety. It gives insight into the regulations that apply to your current and future activities with biotechnology.

More information

You can find our materials on our website:
<https://biotechnologie.rivm.nl/safe-by-design>
For more information, please contact us at:
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Committed to health and sustainability