



How to make your laboratory more sustainable

GREEN YOUR LAB

There are numerous ways to improve sustainability in the laboratory. The suggestions from the Green Team Research & Innovation are intended to help you to create a more environmentally friendly and sustainable laboratory. However, they cannot replace regular discussions with your colleagues and thematic training courses—and, of course, they are not applicable to all laboratory activities. Let us work together to protect our environment and make our university even more sustainable!



Do you use refrigerators, freezers, and other devices in an energy-efficient manner?

- Set the temperature only to the necessary level
- Reduce unnecessary door openings through clear labelling
- Defrost freezers annually
- Consider the energy efficiency class when purchasing new devices
- Close the glass windows on laboratory fume hoods.
- Do not set the temperature of devices, such as PCR machines, outside the necessary range



Green Lab Story from the Department of Physiology of Yield Stability:

„We regularly check whether we can run our freezers at -70°C instead of -80°C - depending on which samples we currently store.“

Do you purchase sustainable laboratory consumables?

- Organize bulk orders
- Pay attention to certifications and seals
- Prefer bio-based products or recycled plastic
- Use return systems and recycling boxes
- Transport, if possible, enzymes without ice
- Be aware of greenwashing



Green Lab Story from the Special Crops Production Systems department:

„When we have collected a box of TipOne components made of polypropylene, we use the Starlab/Remondis collection service.“

Do you always switch off inactive devices?

- Switch off lights when leaving the room
- Use energy-saving mode
- Reduce standby power consumption
- Switch off or unplug devices



Green Lab Story from the Green Office:

„We have multiple sockets with toggle switches, so when we leave the room in the evening, several devices can be switched off with a single click.“

Do you use water and chemicals economically?

- Reuse water in cooling circuits or use water-free condensers
- Use autoclaves at optimal capacity and run them several times in succession
- Multiplex analyses
- Do not plan experiments larger than necessary.
- Calculate exact chemical requirements in advance
- Reduce harmful chemicals (e.g., replace ethidium bromide with peqGreen)
- Run the dishwasher at full capacity and use biodegradable detergents if possible



Green Lab Story from the Department of Food Microbiology and Hygiene at Humboldt reloaded:

„We have replaced our large autoclaves with smaller devices that consume less water. By bundling the cycles according to fixed autoclaving schedules, we ensure the highest possible filling capacity.“

Do you already share equipment and materials?

- For small quantities of chemicals, use or request the chemical register/Damaris/mailling list/chemical disposal service
- Share equipment and materials between working groups
- Carry out regular inventory checks and pass on chemicals, consumables, and equipment if no longer needed



Green Lab Story from the Department of Crop Biodiversity and Breeding Informatics:

„We work closely with the surrounding working groups and are allowed to use their equipment for smaller tests or in case of equipment failures.“

Do you reduce waste before it is created?

- Replace disposable products with reusable ones
- Use biodegradable packaging/ recycled materials
- Archive manuals digitally
- Print standard protocols only once and use them multiple times
- Ensure correct waste separation



Green Lab Story from the Department of Yield Stability Physiology:

„We use the NEB-system for returning packaging. New England Biolabs no longer uses Styrofoam for refrigerated shipping, but straw/hemp instead.“