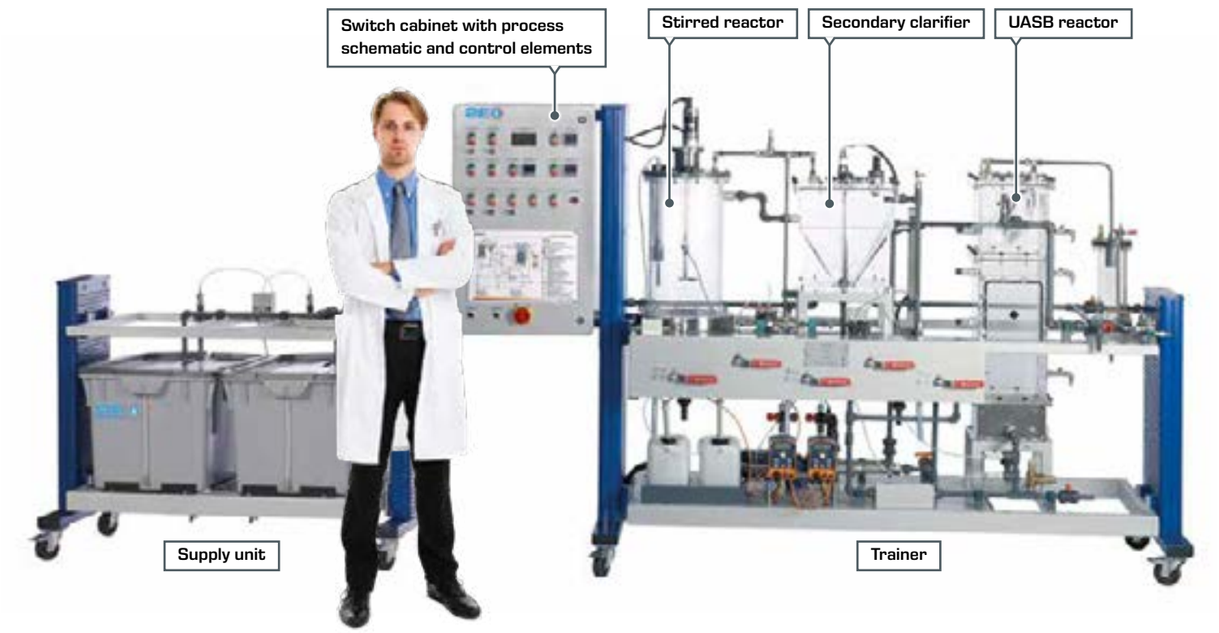
CE 702
Anaerobic water treatment

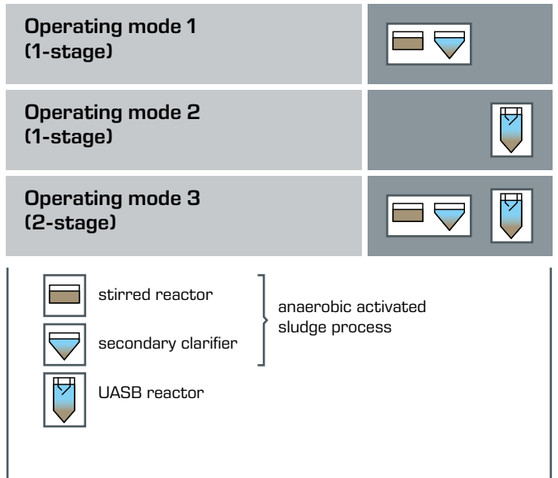


Anaerobic processes are primarily used for wastewater which is highly contaminated with organic substances, such as those occurring in the food industry.

Our CE 702 teaching unit offers you two different methods. These are the anaerobic activated sludge process and the UASB process. You can operate both processes separately (1-stage) or in series (2-stage). This gives you a total of three different modes of operation. The device is also equipped with extensive instrumentation and control technology and software.

You also receive comprehensive instructional material on this device that quickly helps you become familiar with operation of the device. In addition, the theoretical fundamentals of anaerobic wastewater treatment are clearly represented in detail.

The 2-stage operating mode allows you to control the pH and the temperature independently of each other in both stages. This type of process control has proven itself in practice and has the advantage of being able to better adapt the environmental conditions to the needs of each of the degradation steps. The device is equipped with gas collecting pipes, which can be used to take gas samples from the system for analysis.



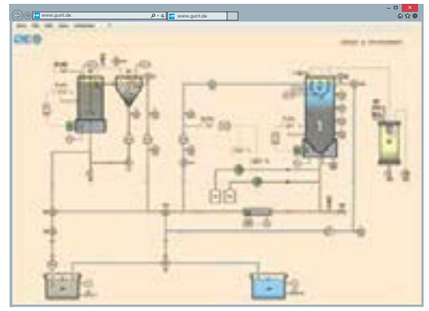
About the product:

www

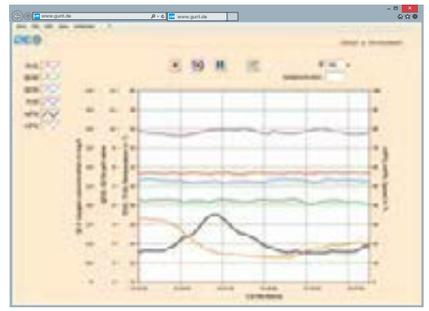
CE 702's UASB reactor during a successful trial run in our laboratory

Software

The software included with CE 702 shows the temperatures and pH values in both reactors continuously. This gives you a quick overview of the conditions in the reactors at any time. You can save the measured values for analysis. This relieves you of routine work and thus aids you when conducting the experiments.



Process schematic with display of the measured values



Display of the measured values as time dependency

Learning objectives

- effects of temperature and pH value on anaerobic degradation
- functional principle of a UASB reactor
- comparison of single stage and dual stage operation mode
- monitoring and optimisation of the operating conditions
- identification of the following influencing factors
  - sludge loading
  - volumetric loading
  - flow velocity in the UASB reactor