

Monitoring of ABPR 1774 requirements in digestion plants for organic waste – inspection, process validation, product control and experiences

Dr. med. vet. W. Philipp Institute for Environmental and Animal Hygiene
University of Hohenheim

ABSTRACT

Since 2002 the legal background for process control and process validation for composting plants and anaerobic treatment plants are described in annex 2 of the „Ordinance on Biowastes“ . Already since the 80th the institute for environmental and animal hygiene has occupied with questions of the hygiene during the composting and anaerobic treatment of biowastes, sewage sludge and other biological wastes. In this work the scientists collected a lot of experiences.

The ABPR 1774 respectively the 208/2006 requires standardised parameters for the anaerobic and aerobic treatment of animal by products (70 ° C, 60 min, 12 mm). The competent authority may authorise the use of other standardised process parameters and it provide an applicant demonstrates that such parameters ensure minimising of biological risks. This requirements shall apply from 1 January 2007 and are described in the **COMMISSION REGULATION (EC) No 208/2006**. Different methods and germ carriers were sketched and developed, with which validating is feasible in composting and in anaerobic treatment plants.

It`s shown that the validation for the treatment of biowastes and slurry is principally possible in simple composting technics but also in technically complicated anaerobic treatment plants. But additionally there must be the possibilities to introduce the „germ carrier“ in the treatment plants. Validation of treatment plants should be done with the exposition of representative test-organisms, followed of the determination of the inactivating rate after the exposition time, so that the technical parameters which must be kept during the constant process control can be defined (HACCP-concept).

The validation with representative „testorganisms“ defines the technical and microbiological parameters which must be kept and help to measure the residual risk during the application of the treated material in the right areas

The monitoring of the end products can be meaningful, if for technical reasons validation is not possible by exposition of test organisms and if the organisms (e.g. *E. coli* or enterocci) can be found in a high number in the raw material. The monitoring of the final products on “natural test organisms” is easily feasible and also cheap because it is not necessary to accomplish additional installations.

However the resistance characteristics of the “natural test organisms” are not defined and therefore always different, in addition to that a coincidentally existing always changing mixing population is judged.