# Liquid manure- Waste product, supplier of nutrients or source of energy?

## When consuming our cutlets we do not think about the unappetizing by-products which evolve during the meat production.

Liquid manure is naturally created as a waste product during intensive mass animal farming. The disposal is expensive and contradicts the idea of recycling management. Additional uses are: the direct distribution of the liquid manure on fields or the utilization of it in biogas plants. The remaining solids from biogas plants are then also directly used as fertilizer on fields.

**An analysis of manure is essential**
Interesting for the usage are the contained amounts of nitrogen, phosphorous, potassium and magnesium. Unwanted are the contained heavy metals. The analytic ascertainment of these contents is therefore absolutely necessary.

Nitrogen is determined in the liquid phase. Phosphorous, potassium and magnesium as the important nutrients for plants and the heavy metals as interfering accompanying elements are according to the internal rules of analysis determined in solids. Hereby the liquid manure is dried at 105°C. The evolved cake is broken down manually and processed with the **Vibrating Cup Mill PULVERISETTE 9** in a hard metal tungsten carbide grinding set for 10 seconds adjusted at “optimal speed”. The evolving powder is absolutely homogenous and analytically fine.

**The PULVERISETTE 9 is perfect for the comminution**
The Vibrating Cup Mill is especially suited for this task because besides the short processing time only very few large parts have to be cleaned. The falsification of the heavy metal contents is excluded through the use of the hard metal tungsten carbide grinding tools.

Liquid manure before processing

dried liquid manure inside the Vibrating Cup Mill

manure ground to a powder

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