

# COMPARISON OF BIOGAS PRODUCTION BY POPPY STRAW WITHOUT MODIFICATION AND BY POPPY STRAW WITH BIOLOGICAL MODIFICATION

## POROVNÁNÍ PRODUKCE BIOPLYNU MAKOVINOU BEZ ÚPRAVY A MAKOVINOU S BIOLOGICKOU ÚPRAVOU

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### **Abstract:**

The aim of this paper was the study of the intensification of biogas production from unprepared substrat and from substrat treated by the biological modification. Poppy straw was chosen to be a suitable substratum as typical biologically broken down waste. Experiments themselves were preceded by the determining basic characteristic of the tested cereals - solid, loss by annealing (organic solid) and chemical consumption of oxygen.

The second observed element entering the system was anaerobic lees from biogas station of the company named EPS, Ltd. in Kunovice and to this element pH, solid, loss by annealing (organic solid),  $KNK_{4,5}$  (acid neutralising capacity) and  $NH_4^+$  (concentration of ammonia ions) were determined. Preliminary data was used for the calculation of suitable doses.

Experiments quantifying the biogas output lasted 40 days and they were done in thermophilic conditions.

### **Keywords:**

poppy straw, biological modification, biogas