

## PLASMOCHEMICAL METHODS FOR PRODUCING SYNGAS FROM AGRICULTURAL WASTE

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At present, there is an increasing interest in creating new environmentally friendly technologies based on plasma processes. The most promising technology for the utilization of agricultural waste is the plasma-chemical technology based on high-temperature plasmochemical action on the utilized products with syngas production and complete decomposition of the utilized waste [1].

An emulsified mixture of cow manure and water was supplied to a metal cell (reactor) of 8 liters capacity to produce the syngas. The incoming emulsion was exposed to the flame of a gas burner (natural gas propane-butane) with a temperature of up to two thousand degrees. The volume of the released gas was 0.176 m<sup>3</sup>, and the volume of the consumed domestic gas in the burner was 0.036 m<sup>3</sup> during the course of the reaction for 15 minutes.

It has been shown experimentally that plasmochemical treatment of hydrocarbon and agricultural wastes is a highly effective method of producing syngas, which is used as a fuel for heating or generating electricity for a gas power plant. The plasmochemical set-up developed allows processing not only agricultural waste, but also any waste containing organic components.

### References:

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