

METHODS OF BIOMASS PRETREATMENT

ABSTRACT

The invention is directed to methods for the pretreatment of a lignocellulose-containing biomass. Pretreatment comprises the addition of calcium hydroxide and water to the biomass to form a mixture, and subjecting the mixture to relatively high temperatures for a period of time sufficient to render the biomass amenable to digestion. The pretreated biomass is digested to produce useful products such as feedstocks, fuels, and compounds including fatty acids, sugars, ketones and alcohols. Alternatively, the pretreatment process includes the addition of an oxidizing agent, selected from the group consisting of oxygen and oxygen-containing gasses, to the mixture under pressure. The invention is also directed to a method for the recovery of calcium from the pretreated biomass.

No figure suggested