

Title (en)

METHOD AND APPARATUS FOR PREPARING OR PROCESSING A PROCESS MATERIAL, WHICH IS SURROUNDED BY A GASEOUS MEDIUM, WITH THE AID OF ELECTRICAL DISCHARGES

Title (de)

VERFAHREN UND VORRICHTUNG ZUM VORBEREITEN ODER BEARBEITEN EINES VON EINEM GASFÖRMIGEN MEDIUM UMSCHLOSSENEN PROZESSGUTES MITHILFE ELEKTRISCHER ENTLADUNGEN

Title (fr)

PROCÉDÉ ET DISPOSITIF DESTINÉS À TRAITER OU USINER UN PRODUIT À TRANSFORMER ENTOURÉ PAR UN FLUIDE GAZEUX À L'AIDE DE DÉCHARGES ÉLECTRIQUES

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Abstract (en)

[origin: WO2012069632A1] The invention relates to a method and to an apparatus for preparing or processing process material, in particular biological process material. The present invention provides an improved and more energy-efficient method and an associated apparatus for destroying or disintegrating the surface and/or the cells of biomasses in the broadest sense (process material) for more rapid liberation and more effective recovery of the contents. According to the invention, the process material is exposed to channel-like, low-energy electrical gas discharges or physical plasma. Efficient disintegration or destruction of the surface/cells is achieved on account of the internal discharge pressure. In the process, the electrical gas discharges or physical plasma are caused by a high voltage with a high frequency, this voltage being generated by an apparatus by the preferably resonant magnetic coupling of at least two electrical resonant circuits.

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