

Title:	An acoustic mist bioreactor
Abstract:	<p>The present invention relates to a device for an acoustic mist bioreactor. In particular this bioreactor uses an acoustic field to generate the nutrient medium mist for enhanced mass transfer in hairy root cultures.</p> <p>The major utility of this invented acoustic mist bioreactor is in plantbiotechnology for example:</p> <ul style="list-style-type: none"> a) For the biomass production of cultured plant tissues eg. hairy root cultures for obtaining phytochemicals, which can be used in food, chemical, and pharmaceutical industries. b) For the biomass production of plant tissue and cell cultures for obtaining phytochemicals, which can be used in food, chemical, and pharmaceutical industries. c) For mass propagation of plants. <p>Acoustic mist bioreactor offers following advantages:</p> <ul style="list-style-type: none"> a) Efficient mist generation, which in turn results in efficient mass transfer. b) Enables to run the bioreactor at higher biomass densities, which results in higher productivities. c) High-energy efficiency, since acoustic transducers are high voltage, low energy drawing devices. d) Simplicity in operation and ease of scale-up.