PROCESS AND DEVICE FOR PRODUCTION OF CULTURED MEAT

ABSTRACT

The present invention relates to a process for the production of in vitro engineered tissues, also known in the art as cultured meat, cultivated meat, cell based meat, cellular meat and/or clean meat, and a device for the production of the same. The process comprises the steps of: loading sterilizable 3D scaffolds into a seeding chamber, sterilization of the scaffolds in the seeding chamber, seeding the scaffolds by loading a first volume of culture medium into the seeding chamber, wherein the first volume of culture medium has a density of cells in suspension of 5,000 to 25,000 cell/cm^2, more preferably from 10,000 to 16,000 cm^2 such that the scaffolds are immersed in the culture medium, leaving the scaffolds and the first volume of culture medium in the seeding chamber for a period of 2-24 hours at 18-37 ºC, loading a second volume of culture medium into a bioreactor, the second volume being greater than the first volume of the culture medium wherein an incubation position of one or more movable grids inside the bioreactor confines the scaffolds to the second volume of the culture medium such that they remain immersed during an incubation step, wherein the scaffolds and the second volume of culture medium are incubated in the bioreactor for a period of 10-60 days at 18-37 ºC and at a pH between 6.5-8.0, more preferably 7.0-7.4.The invention also relates to a device for the production of cultured meat.