Summary

Surprisingly, it has been found that contacting the cell culture medium comprising the cells of interest with a surface on which one or more lectins suitable for binding to one or more species of microorganisms are immobilized leads to the reduction of microbial contamination in the cell culture without need of antibiotics.

A first aspect of the disclosure relates to a cell culture vessel characterized in that it comprises an inner surface on which one or more lectins suitable for binding to one or more species of microorganisms are immobilized.

In other words, the present disclosure also refers to a cell culture vessel characterized in that the inner surface bears one or more lectins suitable for binding to one or more species of microorganisms.

The cell culture vessel may be suitable for any cell culture. In a preferred example, it is suitable for culturing eukaryotic cells. In a preferred example, it is suitable for culturing human, animal, fungal or plant cells. In a preferred example, it is suitable for culturing human or animal cells, in particular human or other mammalian cells. In a preferred example, the cell culture vessel is suitable for preparing comestible goods.

The inner surface of the cell culture vessel may also be understood as the inner side or as the interior or the inner wall of the cell culture vessel or the inner wall of the cell culture vessel. The inner surface of the cell culture vessel may be considered as antimicrobial or antiseptic surface.

In a preferred example, binding of the one or more lectins to the one or more species of microorganisms is non-covalent binding.

Another aspect of the disclosure relates to a method for cultivating cells comprising the following steps: (i) providing cells in a cell culture medium; (ii) contacting the cell culture medium comprising the cells with a surface on which one or more lectins suitable for binding to one or more species of microorganisms are immobilized; and (iii) cultivating the cells in the cell culture medium in contact with the surface.

Another aspect of the disclosure relates to a use of a lectin suitable for binding to one or more species of microorganisms, which is immobilized on a solid surface, for reducing the microorganism contamination in a cell culture contacted with the surface.

Detailed Description

As used throughout the present invention, “suitable for binding“ may be understood in the broadest sense. In a preferred embodiment, “suitable for binding“ means binding with a dissociation constant (Kd) of less than 10 µM, less than 1 µM, less than 500 nM, less than 200 nM, less than 100 nM, or less than 50 nM.

In a preferred embodiment, binding of the one or more lectins to the one or more species of microorganisms is specific binding. As used throughout the present invention, “specific binding“ or “specifically binding” may be understood in the