Abstract:

The benefit of controlled and modified atmospheres for extending the storage life of fruits is world wide accepted. However, there are secondary effects such as the incidence of anaerobic respiration or the off-favour occurrence which are not sufficiently known and thus controlled. This study approaches the knowledge of those secondary effects by developing a spatial temporal model gathering fluid flow phenomenon and physic and physiological processes. The lattice Boltzman model used as framework for mimicking the fluid flow shows to be a very flexible tool which reproduces complex macroscopic behaviours on a down up strategy.