

**Title** Modelling the aroma regeneration after long term storage of apple at modified atmospheres  
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### **Abstract**

Experimental data was collected on the volatile production of 'Jonagold' apples during two weeks shelf life following 8 months of either ULO, CA or RA. The experimental results show a wide range of different time lapses during shelf life. A simple model was proposed consisting of three consecutive reactions describing how the substrate, via one intermediate compound is degraded into an aroma compound that subsequently evaporates from the fruit into the surrounding air. This simple linear reaction chain approach was able to capture the behaviour of all measured volatile compounds by attributing the effect of the applied MA conditions solely to an effect on the first reaction step. The aroma production during shelf life can thus be interpreted in terms of how well substrate was conserved during the preceding storage period.