



Supplementary Figure S6: Neurosporene content measurements using optimized growth conditions. The Carotenoid pathway variant with the highest neurosporene content was cultivated with high aeration during exponential growth phase for either 7 hrs in LB miller media or 10 hrs in 2xM9 media supplemented with 0.4% glucose. Their neurosporene productivities were measured by hot acetone extraction and dry cell weight measurements. Ten milliliter of each culture was heated for 48 hrs at 60 °C and the dry cell weights were measured (A) immediately after baking; or (B) after allowing the samples to equilibrate at room temperature for 4 hrs. The difference in dry cell weight measurements yielded an average difference of 27% in dry cell weight, which resulted in a 28% change in the neurosporene productivity. All carotenoid content and pathway productivity measurements were obtained using the (B) approach, allowing samples to equilibrate after heating.