

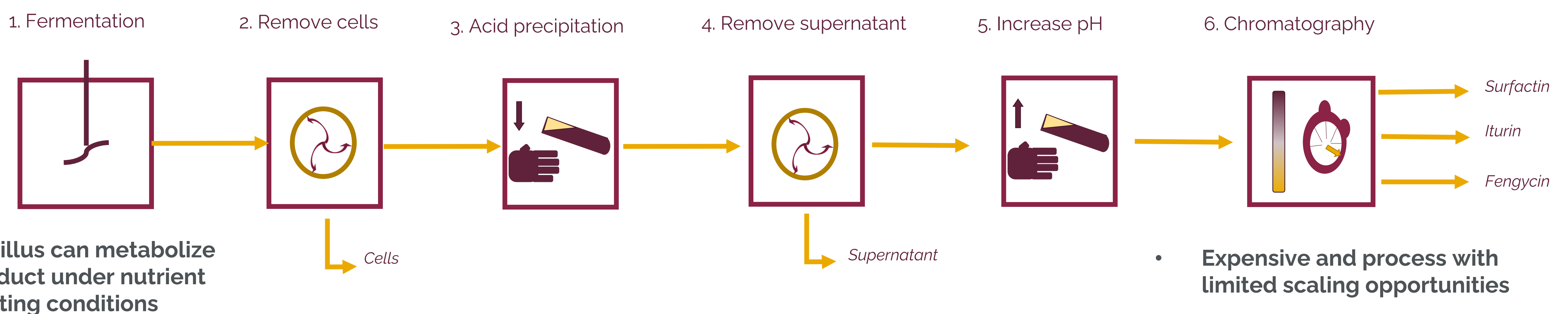
## 2. Aims

- Lipopeptides are surface acting molecules with antibacterial, antiviral, antifungal properties produced by *Bacillus spp.*
- Bacillus* can metabolize product under nutrient limiting conditions
- In-situ* separation using an aqueous two-phase system (ATPS) can prevent this by removing the product from the cells
- Polymer length can be used to separate lipopeptide families from each other

This project aims to produce and purify lipopeptides under aqueous two-phase conditions with the following objectives:

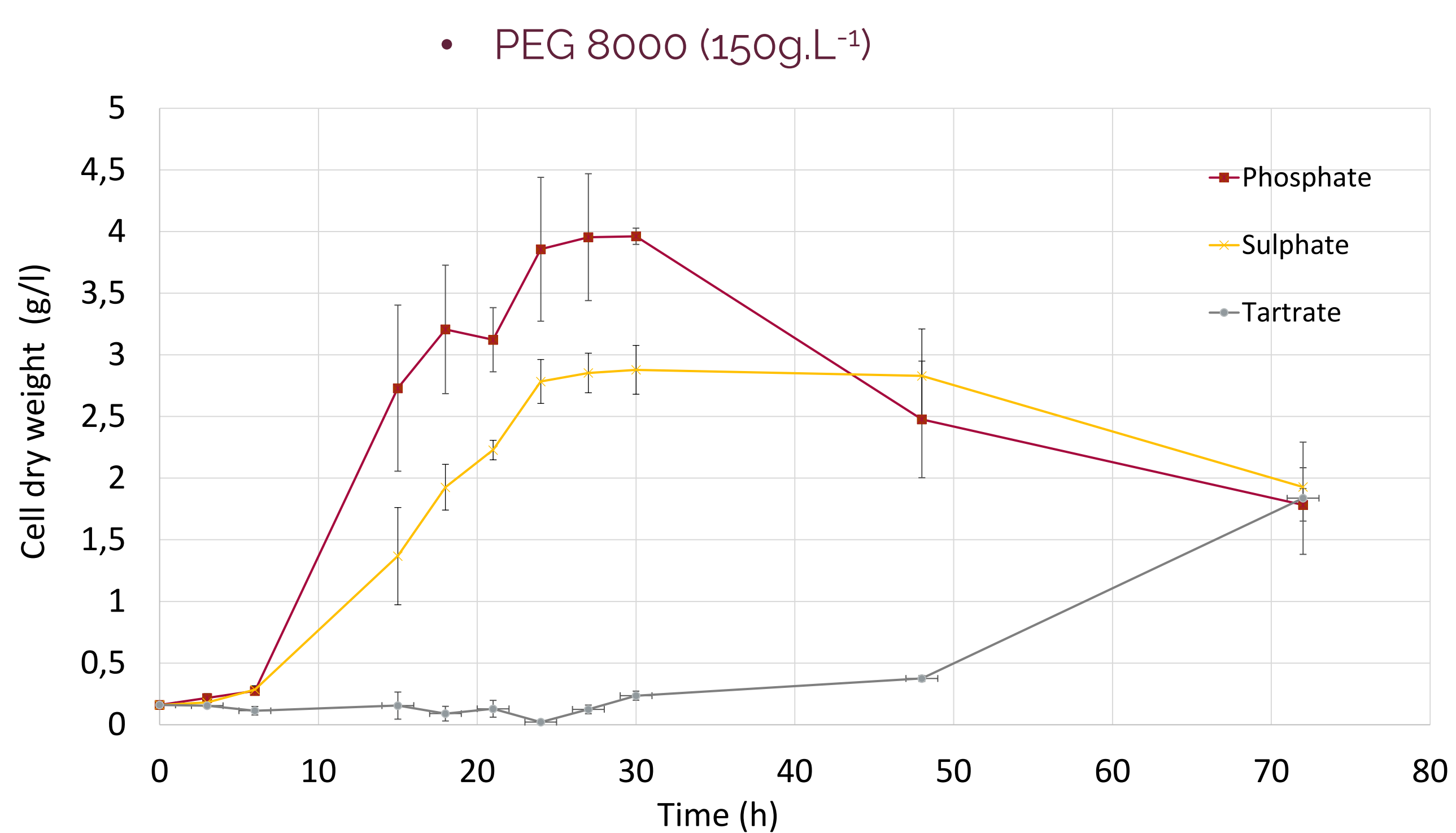
- Determine possible ATPS conditions to support growth
- Quantify the effect of surfactants on phase behavior
- Explore the effect of polymer length on lipopeptide partitioning

## 3. Typical lipopeptide process

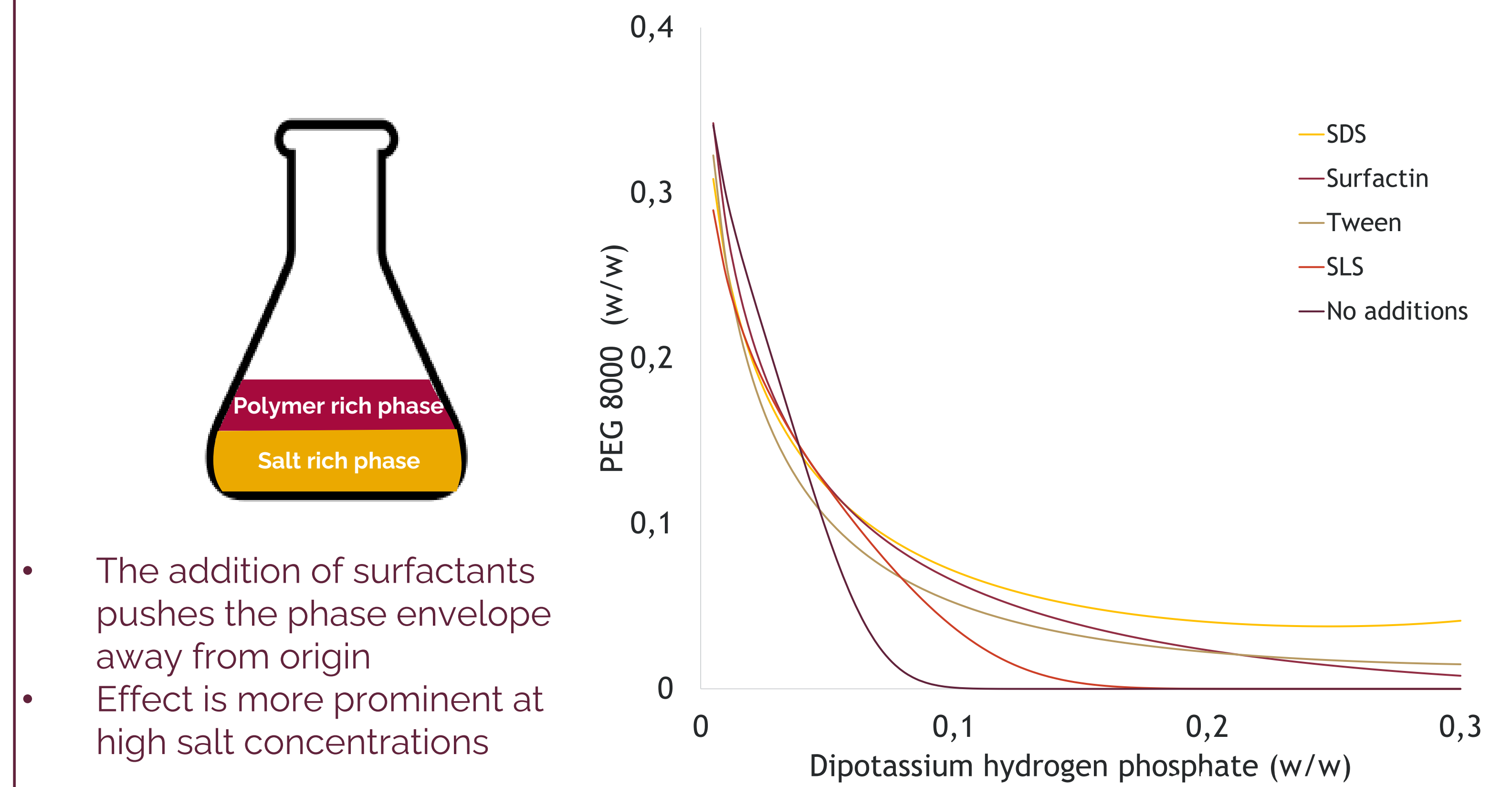


- Bacillus* can metabolize product under nutrient limiting conditions

## 4. Biomass and lipopeptide production



## 5. Effect of surfactants on phase envelope



## 6. Effect of polymer length on separation

