**Activity A**

**Instructions:**

Read the following two excerpts from chemical engineering bachelors’ theses. There are two versions of each excerpt. After reading both versions (A and B), decide which version looks more like academic writing from the field of chemical engineering. *Please note the second excerpt is on the back side of this handout.*

**Excerpt 1**

*Version A*

Supersaturation is one of the driving forces for crystallization. (Shih et Al, 2016). In supersaturated solutions, the liquid is saturated with more solved substance than it could normally contain. It can be achieved with changing the solubility i.e. by changing the temperature of the solution. (Krishnan, 2013). Other means to achieve supersaturation are the evaporation of solvent, precipitation with chemical reactions and antisolvent crystallization. (Krishnan, 2013). The thermodynamic driving force for crystallization in supersaturated solution can be determined with equation (2.1). (Söhnel et Al, 1992)

*Version B*

Shih et al. (2016) has found that supersaturation is one of the driving forces for crystallization. In supersaturated solutions, the liquid is saturated with more solved substance than it could normally contain. In his work, Krishnan (2013) found that these solutions can be achieved with changing the solubility i.e. by changing the temperature of the solution. Further, other means to achieve supersaturation are the evaporation of solvent, precipitation with chemical reactions and antisolvent crystallization (Krishnan, 2013). According to Söhnel et al. (1992), the thermodynamic driving force for crystallization in supersaturated solution can be determined with equation (2.1).

*Excerpt 2 on the next page =>*

**Excerpt 2**

*Version A*

Plastic production and plastic waste have sparked many conversations in the last ten years, but what is the state of plastic production and pollution. In 2014 plastic production was already 311 million tons, and it has been predicted to triple by 2050, according to [1]. Plastic has its effects on the environment, from production all the way to recycling. Total carbon footprint of plastics accounted for 4.5 % of global greenhouse gas emissions in 2015, and the plastic waste often ends up in nature and harms ecosystems. The total bioplastic production was only 2.11 MT which counts as one percent of the plastic field; even though the bioplastics account for only a small proportion of all plastic made, it has been predicted to increase in the future [2]. Alongside the massive growth of plastic production, bioplastic production has also increased [3]. If bioplastics are a better option than conventional plastics, why haven’t we adopted them into more extensive use?

*Version B*

Plastic production and plastic waste have sparked many conversations in the last ten years, but what is the state of plastic production and pollution. In 2014 plastic production was already 311 million tons, and it has been predicted to triple by 2050, according to Antoine Frérot (2016, 5). Plastic has its effects on the environment, from production all the way to recycling. Total carbon footprint of plastics accounted for 4.5 % of global greenhouse gas emissions in 2015, and the plastic waste often ends up in nature and harms ecosystems. The total bioplastic production was only 2.11 MT which counts as one percent of the plastic field; even though the bioplastics account for only a small proportion of all plastic made, it has been predicted to increase in the future (European bioplastic, 2020). Alongside the massive growth of plastic production, bioplastic production has also increased (Niaounakis, 2013, 55). If bioplastics are a better option than conventional plastics, why haven’t we adopted them into more extensive use?