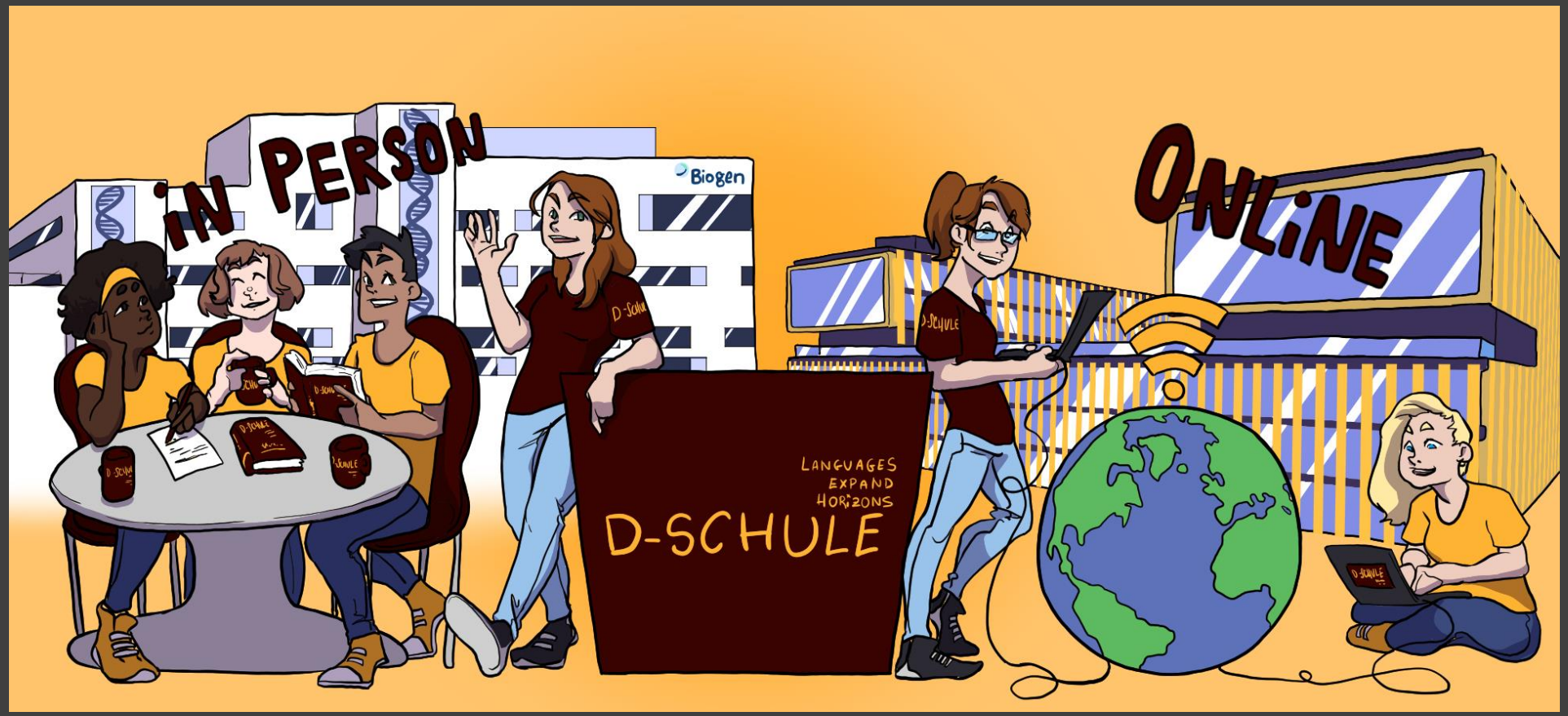
Biogen Specific Teaching Material

Introduction to DSP – Harvesting



Questions & Answers

1. Name at least two (2) traditional harvesting techniques.

1. Possible answers: Membrane microfiltration, tangential-flow filtration (TFF, or crossflow filtration), centrifugation, depth filtration and specialized solutions.

2. The need for monitoring differential pressure, conducting economic evaluation at all scales, removing and disposing of filters; scaling-up limitations are examples of which cell separation method?

2 They are examples of the disadvantage of depth filters in centrifugation.

3. What needs to be considered when the membrane technique is used?

3. The size and fouling potential of the membrane.

4. Which device is most effective for separating whole cells from large cell debris?

4. To separate out whole cells and large cell debris, we use a disk-stack separator (conical plate centrifuge).

5. What adverse effect can shearing have?

5. Shearing can damage cells and increase the number of submicron particles that cannot be removed.

6. What benefits do TFF cassettes provide over traditional cassette formats?

6. Cost savings, lower risk of cross contamination, and greater manufacturing flexibility.

7. Regarding feedstock quality, which harvesting technique is highly sensitive to changes in cell culture viability, cell density, and medium components?

7. Microfiltration is the harvesting technique which is highly sensitive to such changes.

8. Low levels of endotoxin and other contaminants are a characteristic of which type of membrane?

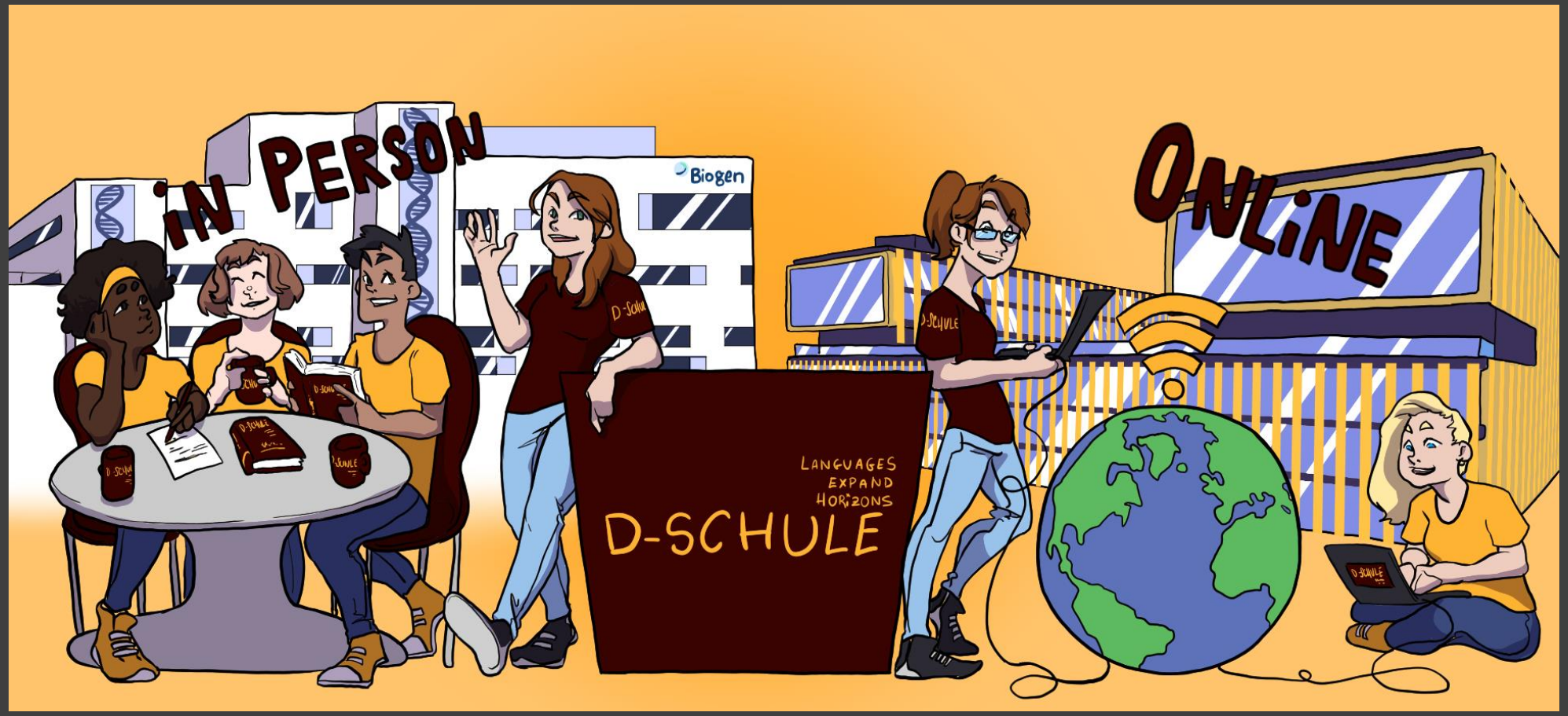
8. Low levels of endotoxin and other contaminants are characteristic of polyethersulfone (PES).

9. Fill in the gaps: High cell _____ and low _____ result in larger numbers of whole cells and solid impurities such as _____ and cell debris.

9. densities; viabilities; colloids.

Thank you for your attention!

D-SCHULE – Your Language School



D-SCHULE
Domenika Hüsser
info@d-schule.ch
+41 79 730 52 35