

# Biogen Specific Teaching Material

## Introduction to USP – What is a Bioreactor?





# Questions & Answers

## Introduction to USP – What is a Bioreactor?

1. How many layers does a bioreactor vessel wall have and what are they called?

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1. The bioreactor has four walls: Interior wall, glycol jacket, insulation, outer sheath.

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2. Name some reasons for a stirred tank bioreactor having a curved base?

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2. Sample answer: The curved base allows for better mixing (stirring) of vessel contents, easier cleaning and less corrosion.

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3. Fill in the gaps: A large-scale bioreactor is a \_\_\_\_\_  
mechanical system designed to contain and grow \_\_\_\_\_  
engineered cells at large-scale commercial \_\_\_\_\_.

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3. Answers: closed, genetically, volumes.

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4. What does the outer sheath enclose?

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4. The outer sheath encloses the insulation and glycol jacket.

### 5. What is electropolishing?

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5. Electropolishing is an electrochemical method of smoothing, deburring, polishing, and cleaning stainless steel.

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6. What is synonymous with 'large-scale'?

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6. Sample answer: large volume

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7. Name a few functions the insulation layer in the vessel wall serves?

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7. Sample answers: Insulation serves to contain the heat in the vessel, and to prevent heat from escaping to the outer sheath.

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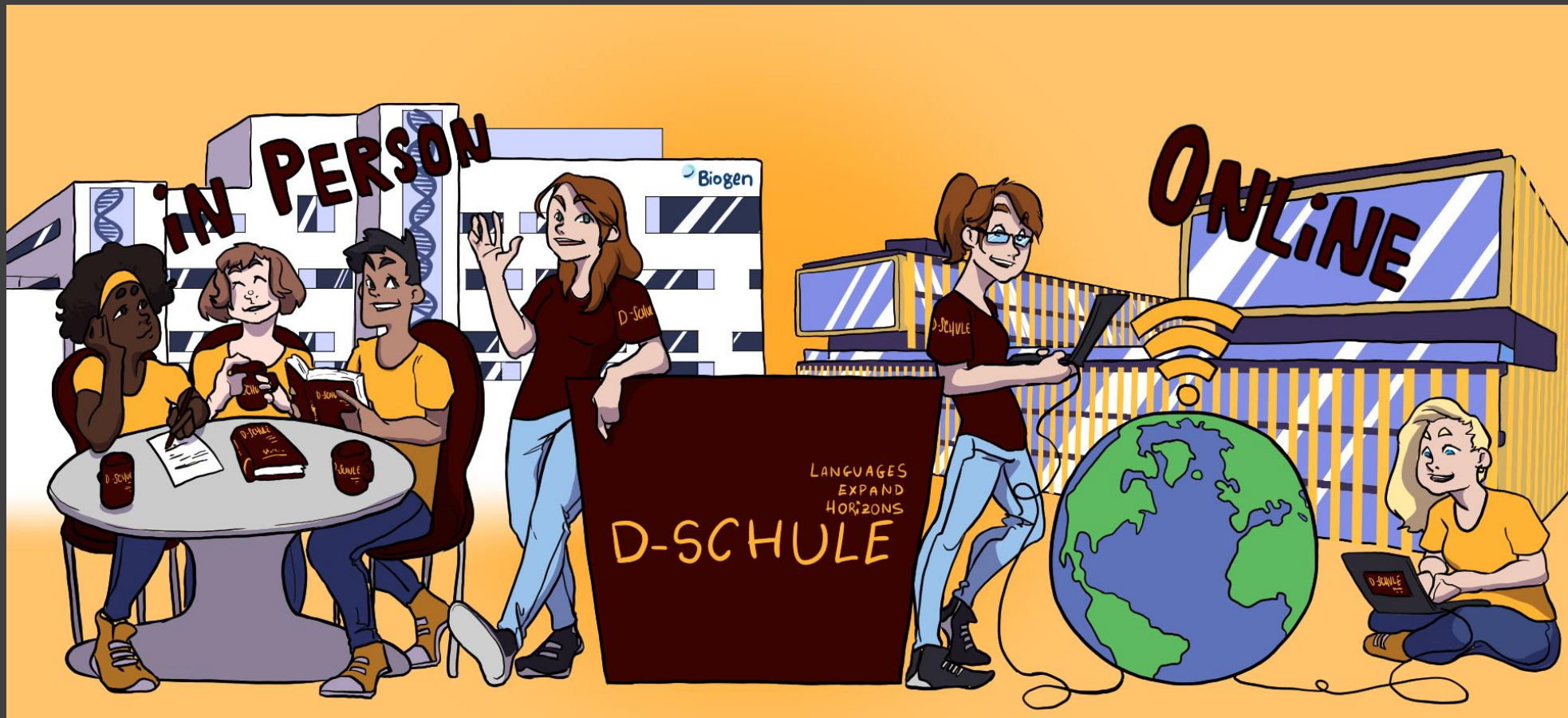
8. On which layer of the bioreactor is a 'finish' applied?

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8. A finish is applied on the interior wall of the bioreactor.

# Thank you for your attention!

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