

Biogen Specific Teaching Material

Measurement of Variables Critical to Controlling Processes – Conductivity





Questions & Answers

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1. What does electrical conductivity (specific conductance) represent?

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1. It represents a material's ability to conduct an electric current.

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2. What does the Greek letter ρ represent in electrical engineering?

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2. It represents resistivity.

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3. All three (3) Greek letters / σ / κ / γ / may be used to mean 'electrical conductivity'. (true or false?)

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3. It is true.

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4. While monitoring the value of conductivity, what happens when the conductivity drops to the value of rinse water?

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4. It means that the next step in the cycle can begin.

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5. Name three (3) oxidants which are used in a sanitise cycle for reducing bacterial contamination.

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5. hydrogen peroxide, ozone, chlorine dioxide, or other chlorine-containing compounds. (possible answers)

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6. What is the SI unit of electrical conductivity?

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6. Siemens per metre (S/m).

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7. How can the electrical conductivity of a solution be measured?

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7. By determining the resistance of the solution between two flat or cylindrical electrodes separated by a fixed distance.

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8. How can one determine when the next step of the CIP cycle can begin?

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8. By monitoring the value of conductivity: When the conductivity drops to the value of rinse water, it indicates the next step in the cycle can begin.

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9. Why are conductivity analyses essential during the CIP process?

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9. Conductivity analysis during a CIP are essential because they keep track of the amount of fluids needed as well as provide a statement on the status of the cleaning.

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10. What is a common occurrence during a CIP?

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10. Fluids can often be only partially neutralised in the process.

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11. Effective analytical measurements are critical, particularly in highly regulated biotech and pharmaceutical industries, for which main reason(s)?

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11. They ensure high production quality, operational efficiency, and they meet the hygienic standards.

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12. In the article, how many factors are involved in the CIP process in total?

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12. There 5 goals for the CIP process mentioned in the article.

Thank you for your attention!

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