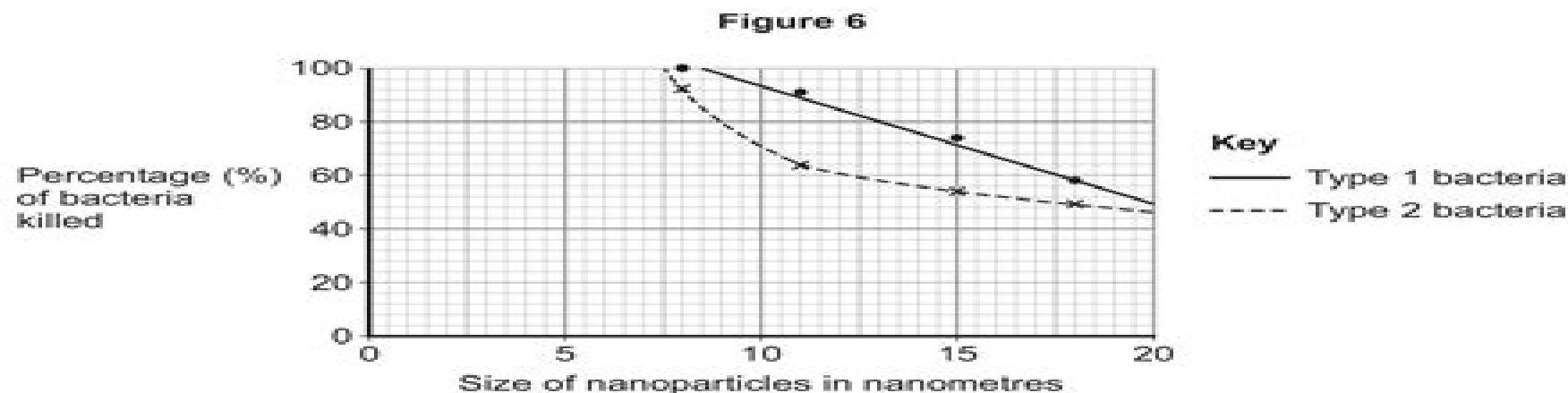


6

Magnesium oxide nanoparticles can kill bacteria.

Figure 6 shows the percentage of bacteria killed by different sized nanoparticles.



6 (a) (i) Give two conclusions that can be made from Figure 6.

[2 marks]

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6 (a) (ii) Points are plotted for only some sizes of nanoparticles.

Would collecting and plotting data for more sizes of nanoparticles improve the conclusions?

Give a reason for your answer.

[1 mark]

6 (b) Magnesium oxide contains magnesium ions (Mg^{2+}) and oxide ions (O^{2-}).

Describe, as fully as you can, what happens when magnesium atoms react with oxygen atoms to produce magnesium oxide.

[4 marks]

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1. Understanding the eBook Aqa Chemistry Empa 2014
 - The Rise of Digital Reading Aqa Chemistry Empa 2014
 - Advantages of eBooks Over Traditional Books
2. Identifying Aqa Chemistry Empa 2014
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Aqa Chemistry Empa 2014
 - User-Friendly Interface
4. Exploring eBook Recommendations from Aqa Chemistry Empa 2014
 - Personalized Recommendations
 - Aqa Chemistry Empa 2014 User Reviews and Ratings
 - Aqa Chemistry Empa 2014 and Bestseller Lists

5. Accessing Aqa Chemistry Empa 2014 Free and Paid eBooks
 - Aqa Chemistry Empa 2014 Public Domain eBooks
 - Aqa Chemistry Empa 2014 eBook Subscription Services
 - Aqa Chemistry Empa 2014 Budget-Friendly Options
6. Navigating Aqa Chemistry Empa 2014 eBook Formats
 - ePub, PDF, MOBI, and More
 - Aqa Chemistry Empa 2014 Compatibility with Devices
 - Aqa Chemistry Empa 2014 Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Aqa Chemistry Empa 2014
 - Highlighting and Note-Taking Aqa Chemistry Empa 2014
 - Interactive Elements Aqa Chemistry Empa 2014
8. Staying Engaged with Aqa Chemistry Empa 2014
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Aqa Chemistry Empa 2014
9. Balancing eBooks and Physical Books Aqa Chemistry Empa 2014
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Aqa Chemistry Empa 2014
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Aqa Chemistry Empa 2014
 - Setting Reading Goals Aqa Chemistry Empa 2014
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Aqa Chemistry Empa 2014
 - Fact-Checking eBook Content of Aqa Chemistry Empa 2014
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
- Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

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