

Metal(s) used for surfaces in health care settings: be a medical scientist and decide!

Objectives

- 1) Students will be able to (swbat) generate evidence regarding the metabolism of yeast
- 2) Swbat rank metals in terms of their toxicity, or effect on the metabolism of yeast
- 3) Swbat conclude which metal would be best for surfaces in a health care setting

Procedure

Put on goggles. Fill 6 test tubes halfway with a yeast-sugar solution. Place pieces of (or ___g of granulated) metals into the test tubes and fix a balloon over the test tubes. Time, observe changes in the size of the balloons, and note your comments in the table (below).

1) Describe what you observed:

| metal | after ___ min | after ___ min | after ___ min | after ___ min |
|-------|---------------|---------------|---------------|---------------|
| Zn | | | | |
| Fe | | | | |
| Cu | | | | |
| Ti | | | | |
| Al | | | | |
| none | | | | |

2) Plot your findings using an x-y scatterplot on a separate sheet of graph paper. Be sure to use different symbols for each condition (or metal).

3) Which metal yielded the largest positive effect on yeast metabolism (or balloon size)? Explain.

4) Which metal yielded the largest negative effect on yeast metabolism (or balloon size)? Explain.

5) Which metal(s) would be best and worst for as a surface in a hospital? Explain.
