Graham Brown

**Dog Kennel Unknown**

Table of Tests

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|  | **Observations** | **Positive or Negative** |
| **Nitrate** | Clear, turns red after addition of solutions A and B | Positive |
| **Citrate** | Green slant with red growth | Negative |
| **Urea** | Redish-orange, not red enough for positive result | Negative |
| **Indole** | Added Kovacs and no color change (SIM agar) | Negative |
| **Inulin** | Pinkish color, no gas formation | Negative |
| **Mannitol** | No gas formation, pink color | Negative |
| **Lactose** | No gas formation, pink color | Negative |

On the phenylethyl alcohol agar, there was abundant, uninhibited growth, indicating the presence of a gram-positive bacterium. Upon completion of the gram staining procedure, my conclusions about gram-positive was correct. The oil immersion showed clusters of gram-positive cocci. This is a defining characteristic of *Staphylococcus epidermidis*. Here are explanations of results to confirm answer.

* Nitrate gave a positive result once the reagents were added, but no zinc was present to give final results. *S. epidermidis* gives a positive result for nitrate reduction.
* The citrate slant showed no color change from the original slant color. This test is used to differentiate between members of the Enterobacteriaceae family, which *S. epidermidis* is not a part of.
* The urea test only shows up positive for Proteus species. The test showed an orange-red color, which is not a true positive (experience from the second lab practical).
* The indole test gave off a negative result for H2S production in the SIM agar, and also gave a negative result for the addition of Kovac’s reagent. This result is consistent with *S. epidermidis* species.
* There was no gas formation and no change in color, giving a negative result. This is a characteristic of S. epidermidis
* The result came back negative, showing no color change or gas formation. This is a characteristic of *S. epidermidis*.

For the most part, the tests show my guess is correct: that the bacteria cultivated from the dog kennel is *Staphylococcus epidermidis*. This bacterium is prominent on humans and animals too, so it would not be out of the ordinary to find it in a kennel where an animal stays.