

# Microbiology lab report assignment



**ASSIGN  
BUSTER**

These bacteria are the Enteric bacteria. *Escherichia coli* and *Proteus Hauser* were definitely two of the smelliest ones that I encountered. So I took opened my culture and waffled. It was definitely an Enteric bacteria, though it did not smell as bad as *Escherichia coli* and *Proteus Hauser*. Now smelling is a very inconclusive tests, so I performed various tests to confirm my suspicion. In the end, all of the tests performed confirmed that my unknown was indeed an Enteric bacteria.

It was *Klebsiella pneumoniae*. *K. pneumoniae* occasionally causes pneumonia in humans (Madding et al. 2009, p. 423). *K. pneumoniae* is found in the respiratory tract and in the intestinal tract (Podunk & Almsman, 1998). In recent years, *K. pneumoniae* has been developing resistance to various antibiotics. One important class of antibiotics are carbapenems, which are usually the last line of defense for treatment against a *K. pneumoniae* infection (Brat 2005).

Experimental Procedure - Gram stain Inoculated unknown in the following agar plates: - Penitently Alcohol Agar - Imitation Salt Agar - McCracken Agar - Eosin Methyl Blue agar - Heighten Enteric Agar - Milk agar - Starch agar - Nutrient agar Inoculate in the following tubes: Nutrient agar slant - Simmons citrate agar slant - Nutrient gelatin stab tube - SIMI tube - Phenol Red Glucose, lactose, and sucrose tubes The gelatin stab tubes were put at 35°C for 7 days. Everything else was put at 35°C for around 2 days.

In the SIMI tube Kovacs reagent was added In the starch agar plate, iodine was added. Results The gram stain indicated that the unknown was a small, rod shaped gram negative bacteria. The Penitently Alcohol and Imitation Salt Agar plate showed no growth. The McCracken agar plate showed pink/red

growth. The Eosin Methyl Blue agar plate had dark pink growth in it. The Heighthen agar plate had bright pink/orange growth. The starch plate had no clearing in it after iodine was added. The milk agar plate did not have any clearing either.

The catalane test and citrate test were positive. The SIMI tube did not have any black precipitate, did not react with Kvass reagent, and showed no growth radiating outward. Discussion The gram stain reaction immediately knocked out 7 of the 16 possible organisms that could be my unknown. The lack of growth in the Penitently Alcohol agar plate confirmed that my unknown was gram negative. The results of the growth observed in the McCracken agar plate and the Eosin Methyl Blue agar plate pointed towards the unknown being a chloroform.

The growth in the Heighthen Enteric Agar plate confirmed that the organism was not shillelagh nor salmonella. From the results described only 4 different organisms could now be the unknown inside my test tube, waiting to be identified. These 4 gram negative enteric bacteria are: Interconnect arrogates, Escherichia coli, Kielbasa pneumonia, and Protests Hauser. The tests confirmed that my unknown uses citrate as a source of carbon and energy. E. Coli, however, does not. The list narrows down to three. The deciding factor in this identification would prove to be the result of the SIMI tube.