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Standard Laboratory Operating Procedure #200
Effectiveness of Personal Hygiene Products

Laboratory: Biotechnology
Location: Lab Station
SOP prepared by: R. Sanders and B. Wolfe
Last Revision: 21 July 2013

General: The purpose of this protocol is to investigate the effectiveness of various types of hand cleaners that may have antimicrobial action.

Safety: Safety Glasses, Caution with the alcohol burners

Materials:

E. Coli K12 Starter Plates (microbial culture)
4-5 Various Hand Cleaners
Filter Paper
Single Hole Punch
70% IPA
Alcohol Burner
Small Beaker
Inoculating Loop
Sterile Petri Dishes
Sterile Forceps
Incubator

Procedure:

1. Prepare nutrient agar plates per SOP #351, Agar Prep.
2. Prepare paper disc by sterilizing single-hole punch by dipping in 70% alcohol, then run through flame of alcohol burner, then punch 4-5 discs into appropriately labeled sterile petri dishes.
3. Add 1-2 mL of hand cleaners over sterile discs in appropriately labeled petri dishes and allow discs to soak 1-2 minutes in cleaners.
4. Using sterilized forceps, remove discs from cleaners and place into newly labeled sterile petri dishes to dry. Make sure petri dishes containing the soaked discs are placed next to a lit alcohol burner when drying to create an updraft limiting aerial contamination.
5. While discs are drying, flip 5 petri dishes over and divide the base of the plate into 4 quadrants drawing a cross with a marker. Label quadrants 1-4 along the edge of the plate.
6. Next, label along the edge of the base of petri dishes with the type of cleaner, technicians initials and date.
7. Flame an inoculating loop using an alcohol burner to sterilize. Select a colony from the E. Coli K12 starter plate to swab first test plate. Repeat this step until each test plate has been swabbed with E. Coli K12.
8. Using sterile forceps, place the dry treated paper disc in the middle of each quadrant of the appropriately labeled plates. Flame forceps each time to prevent cross-contamination.
9. Seal the edge of each petri dish with parafilm and place each petri dish upside down on shelf of incubator.
10. Incubate plates for 24 hours at 37 degrees C.
11. After 24 hours of incubation, remove plates from incubator and measure ring of inhibition of each trial.
12. Record measurements in data table of lab notebook.