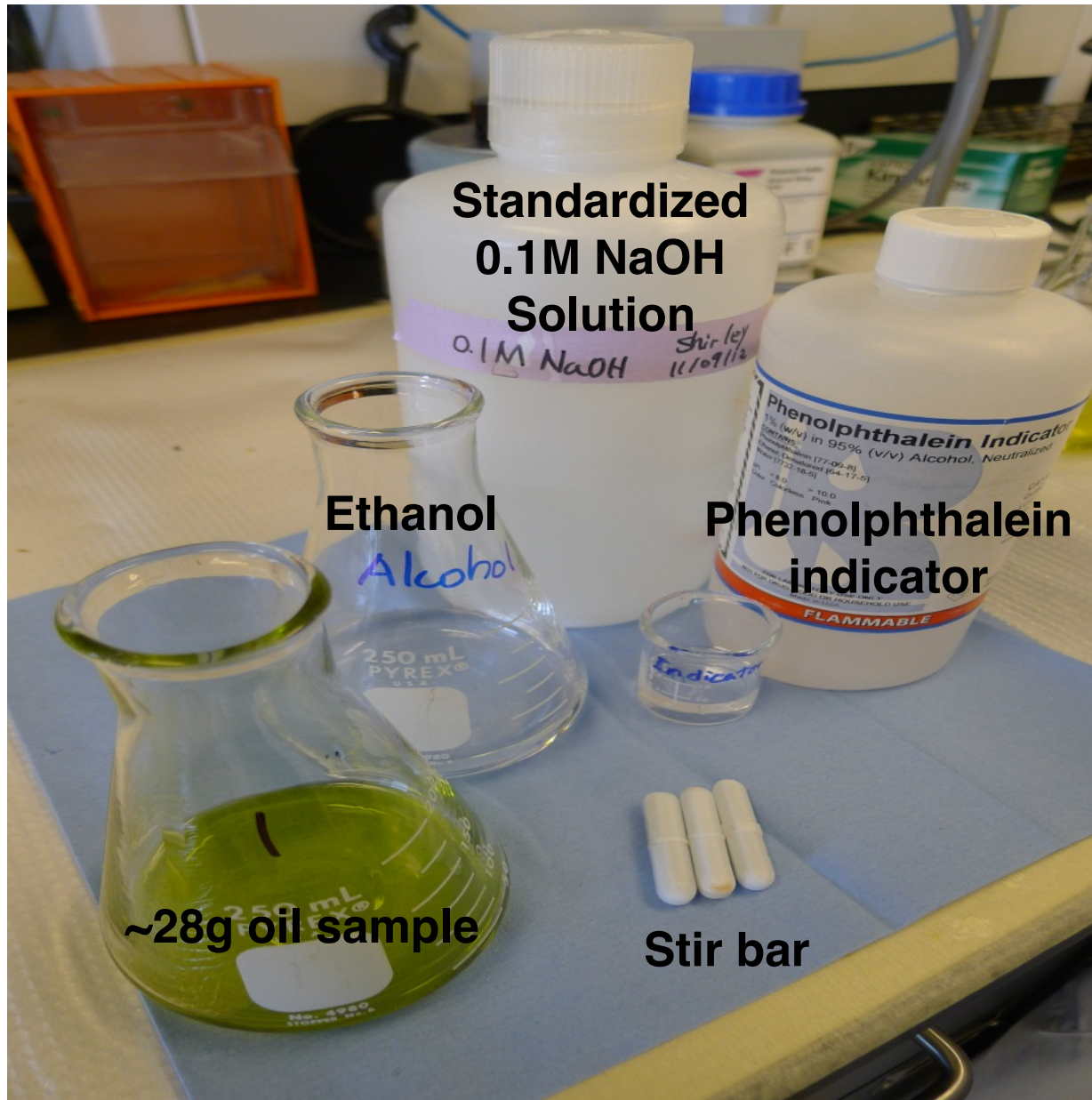


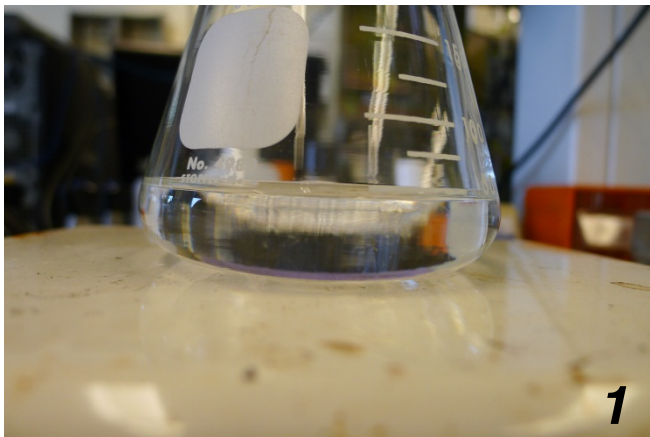
# **FREE FATTY ACID**

**And UV Protocol**

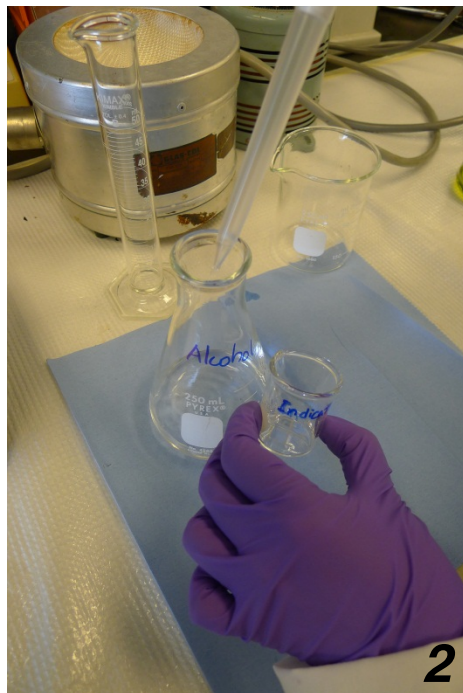
# Free Fatty Acid - Preparation



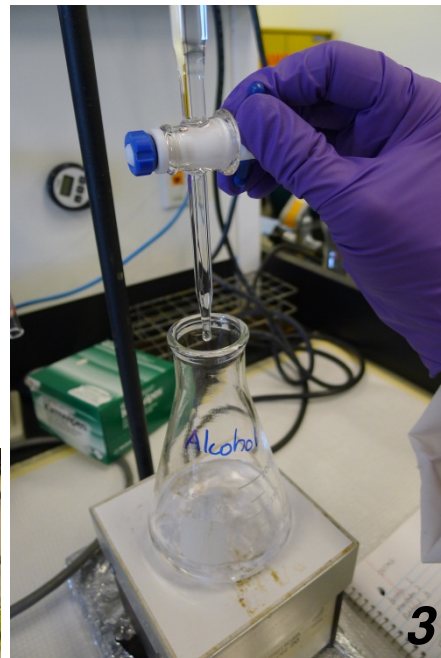
# Free Fatty Acid – Procedure (1)



**1.** Heat 50ml ethanol until convection current appears.

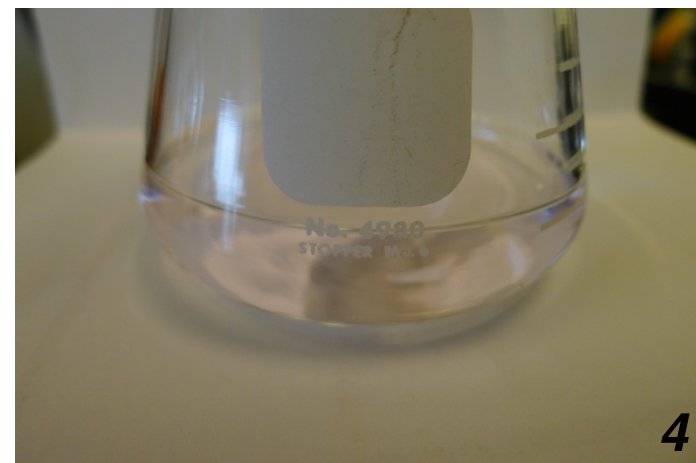


**2.** Add 2ml phenolphthalein indicator into heated ethanol.

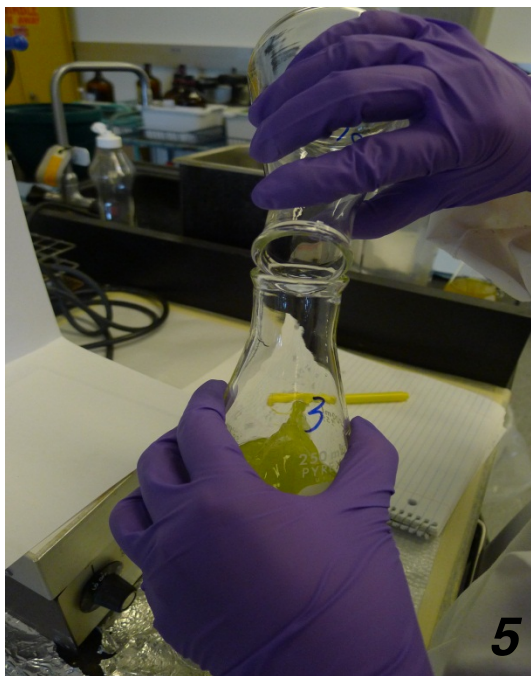


**3.** Neutralize ethanol by titrating it with 0.1M NaOH solution.

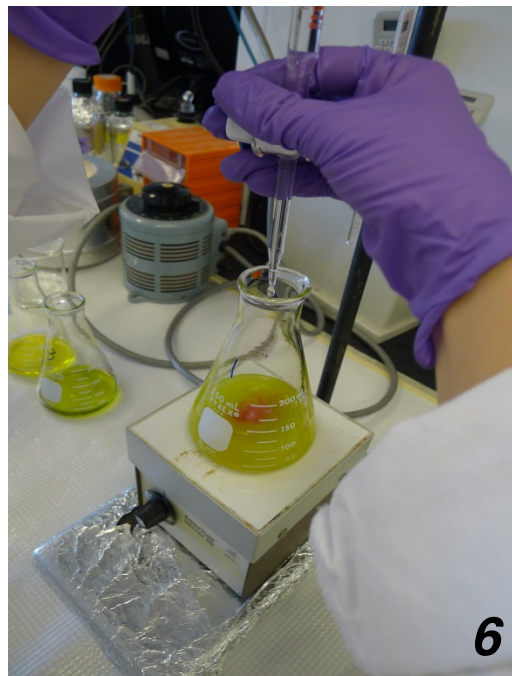
**4.** Until faint pink color appears.



# Free Fatty Acid – Procedure (2)



**5.** Transfer the hot neutralized ethanol into oil sample.



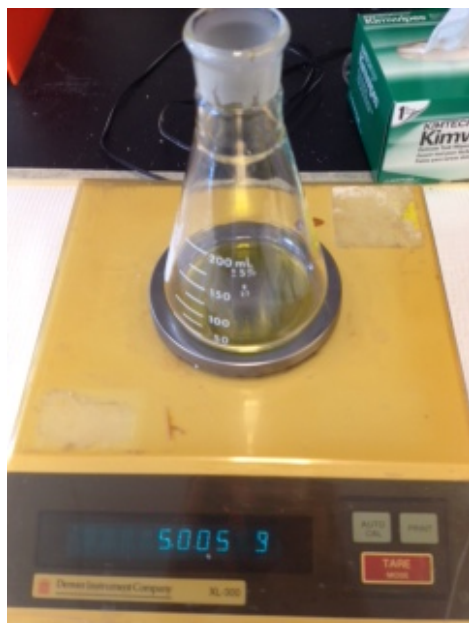
**6.** Titrate with  $0.1M$   $NaOH$  on a stir plate.



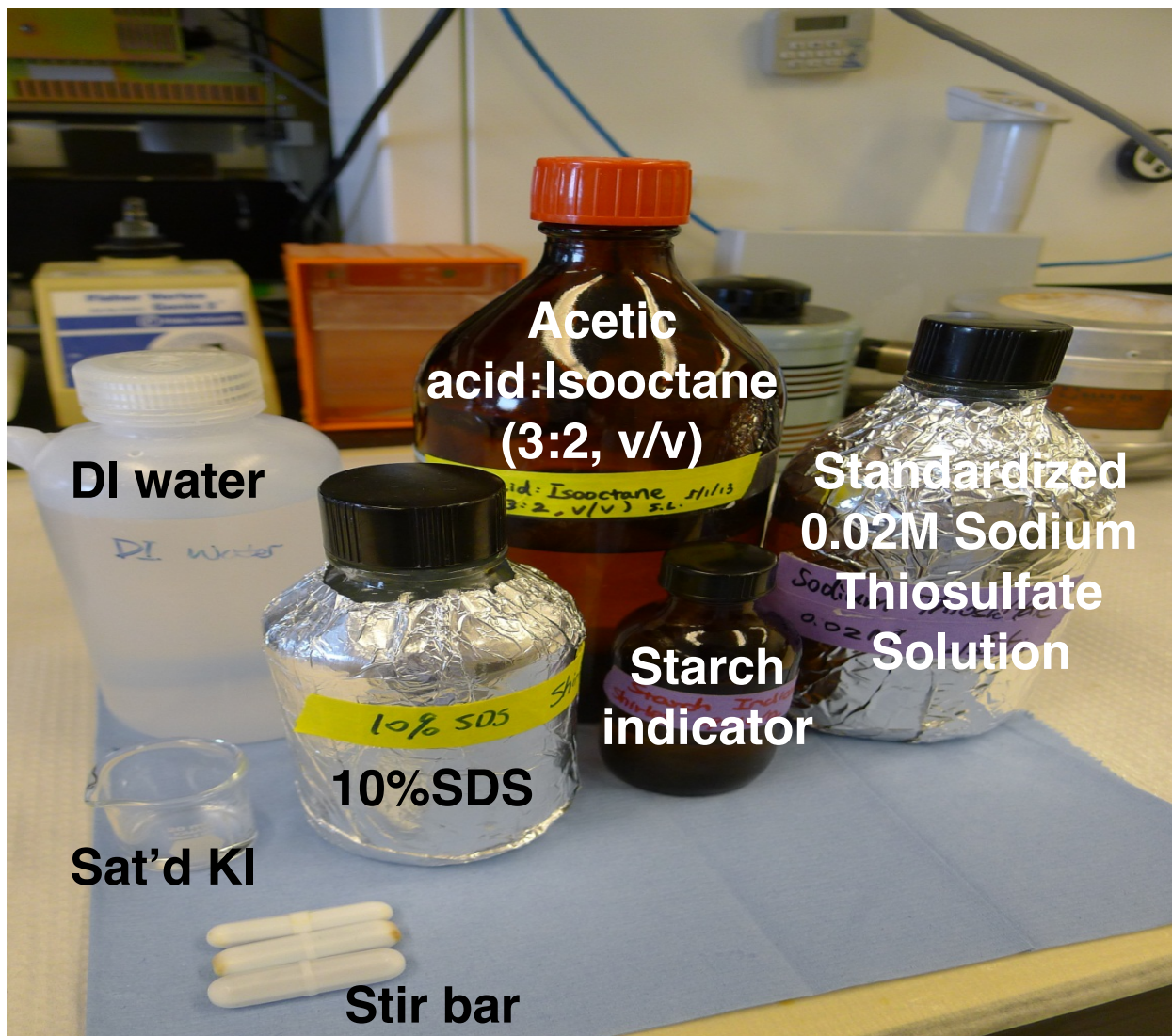
**7.** Shake vigorously until the appearance of the first permanent pink color persist for 30s.

**PEROXIDE VALUE**

# Peroxide Value - Preparation

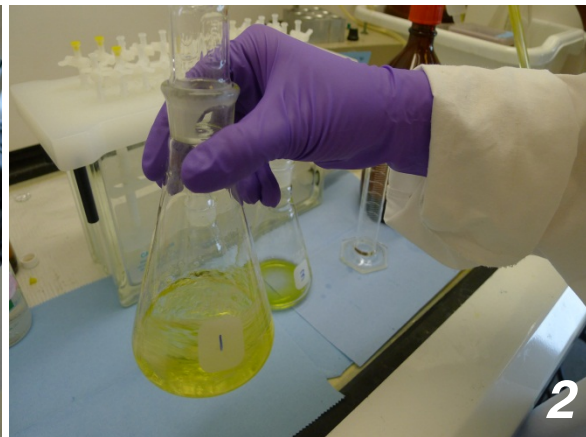
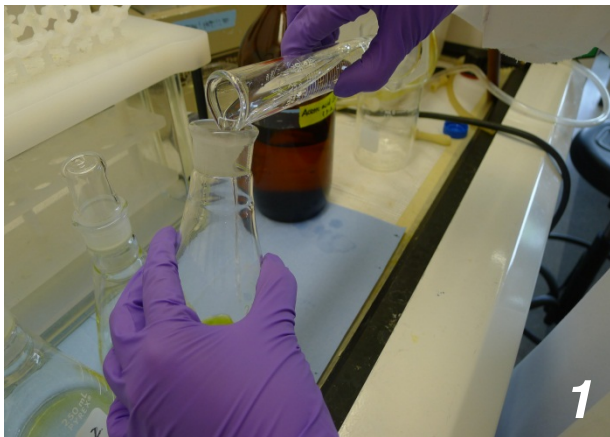


~5.0g oil sample



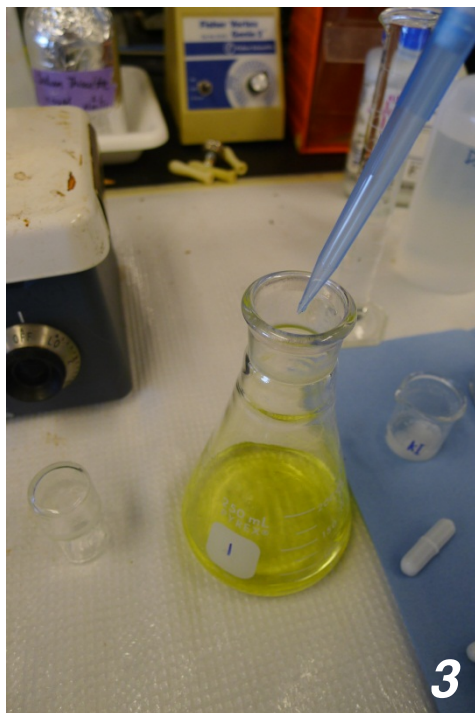
# Peroxide Value - Procedure (1)

1. Dissolve oil sample in 50ml acetic acid/isoocatne solvent.



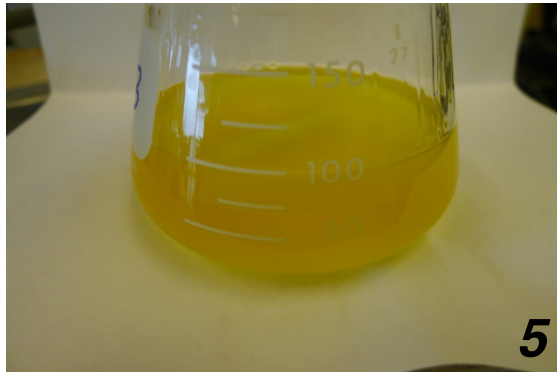
2. Swirl to dissolve the test portion in a 250ml Erlenmeyer flask with a glass stopper.

3. Add 0.5ml saturated KI and allow the solution to stand for exactly 1min, thoroughly shaking the solution during this procedure.

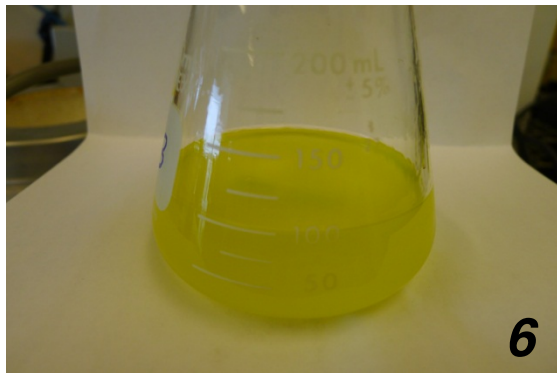


4. Immediately add 30ml DI water into test sample.

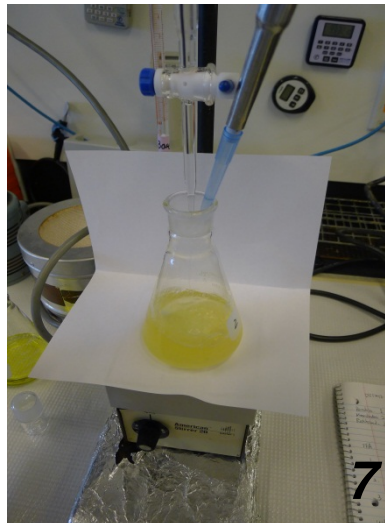
# Peroxide Value - Procedure (2)



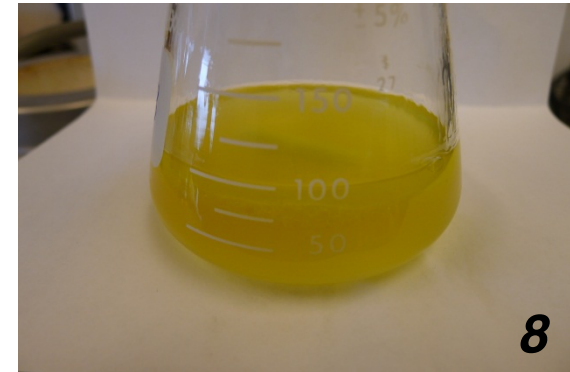
**5.** Titrate with *0.02M sodium thiosulfate*, stir constantly and vigorously.



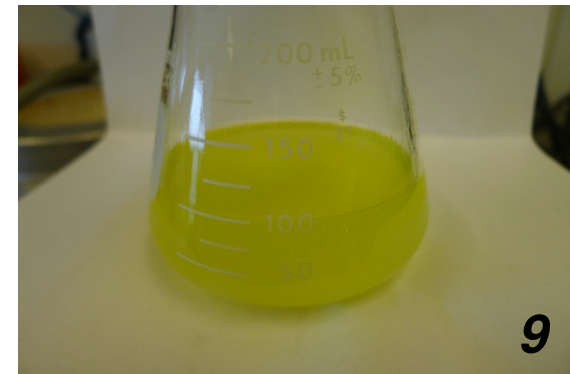
**6.** Until the yellow iodine color has almost disappeared.



**7.** Add *0.5ml 10%SDS* and then *0.5ml starch indicator*.



**8.** Continue the titration with constant agitation.



**9.** Add the *sodium thiosulfate* drop-wise until the dark brown color just disappears.