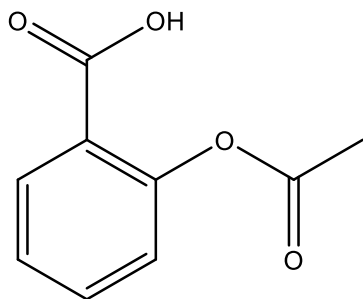


#### Problem 4: Aspirin Overdose (Adapted from the University of Toronto, [Problem-Based Learning: Chemistry](#))

Ms. Keats (age: 85 years old, weight: 50 kg) died from a cardiopulmonary arrest as determined from the autopsy investigation. Toxicology report shows high levels of salicylate. The forensic pathologist wants to investigate further whether Ms. Keats death was a result of chronic salicylate toxicity\*.

5 days before her death, Ms. Keats was prescribed 81 mg aspirin pills to be taken twice (2x) every 4 hours for her rheumatoid arthritis. Ms. Keats obtained her prescription from her pharmacy; however she had an unfinished aspirin bottle in her bathroom cabinet, which she decided to finish first. The label in this old aspirin bottle has faded over time and which makes it impossible to read the reported dosage of the aspirin pills on the bottle.

\*Chronic toxicity from aspirin can result from taking doses of more than 100 mg/kg for more than two consecutive days. (Acute and Chronic Effects of Aspirin Toxicity and Their Treatment. *Archives of Internal Medicine* 1981, 141 (3), 364.)



**Acetylsalicylic acid (Aspirin)**