PHARMACE UTICAL ORGANIC CHEMISTRY-II- BP301T

UNIT: 3 Fats and Oils

CLASS: 4

TOPIC: Saponification Value

Saponification Value:

It is defined as the number of milligrams of potassium hydroxide required to completely saponify 1 gram of fat (or) oil.

Saponification Value = 28.05 (B-A) / W

B = Ml of Hcl used for blank titration

A = Ml of 0.5 N Hcl used for titration

W = Weight of fat / oil

Procedure:

Weigh 2 grams of sample in a conical flask fitted with a reflux condenser add 25 ml of 0.5 N ethanol KOH and small amount of pumic powder and boil on water bath for 30 minutes and add 1 ml of phenolphthalein indicator and titrate with 0.5 N Hcl to form pink color is obtained.

Significance:

Saponification value gives an idea about the molecular weight of fat or oil

The smaller the saponification values higher the molecular weight. It also indicates length of carbon chain of the fatty acid present in the tri glycerides.

Higher the saponification value greater the percentage of the short chain acid present in the glycerides of fat and oil